SEARCH REQUEST FORM

Requestor's Name: _____ Serial Number: _____

Date: _____ Phone: _____ Art Unit: _____

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

STAFF USE ONLY

Date completed: 03-28-03
Searcher: Beverly e-4999
Terminal time: 24
Elapsed time: _____
CPU time: _____
Total time: 27
Number of Searches: 2
Number of Databases: _____

Search Site

_____ STIC
_____ CM-1
_____ Pre-S

Type of Search

_____ N.A. Sequence
_____ A.A. Sequence
_____ Structure
_____ Bibliographic

Vendors

_____ IG Suite
✓ STN
_____ Dialog
_____ APS
_____ Geninfo
_____ SDC
_____ DARC/Questel
✓ Other CGN

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     FILE 'REGISTRY' ENTERED AT 14:26:15 ON 28 MAR 2003
L1            13 S HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSG/SQSP

L1   ANSWER 1 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN   474444-80-9  REGISTRY
CN   L-Serine, L-histidyl-L-seryl-L-.alpha.-aspartylglycyl-L-threonyl-L-
     phenylalanyl-L-threonyl-L-seryl-L-.alpha.-aspartyl-L-leucyl-L-seryl-
     L-lysyl-L-glutaminyl-L-methionyl-L-.alpha.-glutamyl-L-.alpha.-
     glutamyl-L-.alpha.-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-
     phenylalanyl-L-isoleucyl-L-.alpha.-glutamyl-L-tryptophyl-L-leucyl-L-
     lysyl-L-asparaginylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-
     alanyl-L-prolyl-L-prolyl-L-prolyl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   4: PN: WO02085406 SEQID: 7 unclaimed protein
CI   MAN
SQL  39

SEQ      1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPS
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HITS AT:   1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  137:346934

L1   ANSWER 2 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN   437134-20-8  REGISTRY
CN   8: PN: WO0246227 SEQID: 9 unclaimed protein (9CI)  (CA INDEX NAME)
CI   MAN
SQL  39

SEQ      1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPS
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HITS AT:   1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  137:28591

L1   ANSWER 3 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN   421042-94-6  REGISTRY
CN   L-Serine, L-histidyl-L-seryl-L-.alpha.-aspartylglycyl-L-threonyl-L-
     phenylalanyl-L-threonyl-L-seryl-L-.alpha.-aspartyl-L-leucyl-L-seryl-
     L-lysyl-L-glutaminyl-L-methionyl-L-.alpha.-glutamyl-L-.alpha.-
     glutamyl-L-.alpha.-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-
     phenylalanyl-L-isoleucyl-L-.alpha.-glutamyl-L-tryptophyl-L-leucyl-L-
     lysyl-L-asparaginylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-
     alanyl-L-prolyl-L-prolyl-L-prolyl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   2: PN: WO0234285 SEQID: 7 unclaimed protein
CI   MAN
SQL  39

SEQ      1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPS
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HITS AT:   1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**
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REFERENCE 1: 136:350560

L1 ANSWER 4 OF 13 REGISTRY COPYRIGHT 2003 ACS
RN 309729-82-6 REGISTRY
CN Exendin 3 (Heloderma horridum), 39a-[N6-[21-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1,10,19-trioxo-3,6,12,15-tetraoxa-9,18-diazaheneicos-1-yl]-L-lysinamide]-, pentakis(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 38: PN: WO0069911 PAGE: 71 claimed sequence
SQL 40

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SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34
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RELATED SEQUENCES AVAILABLE WITH SEQLINK

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SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34
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RELATED SEQUENCES AVAILABLE WITH SEQLINK

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SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34
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RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 134:13338

L1 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2003 ACS
RN 309729-80-4 REGISTRY
CN Exendin 3 (Heloderma horridum), 39a-[N6-[21-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1,10,19-trioxo-3,6,12,15-tetraoxa-9,18-diazaheneicos-1-yl]-L-lysinamide]- (9CI) (CA INDEX NAME)
CI COM, MAN
SQL 40

```
SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34
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RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 134:13338

L1 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2003 ACS
RN 309257-17-8 REGISTRY
CN 194: PN: WO0069900 SEQID: 373 unclaimed protein (9CI) (CA INDEX NAME)
CI MAN
SQL 40

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SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
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```

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HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE    1:  134:21425

L1    ANSWER 7 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN    308806-01-1  REGISTRY
CN    L-Lysine, L-histidyl-L-seryl-L-.alpha.-aspartylglycyl-L-threonyl-L-
      phenylalanyl-L-threonyl-L-seryl-L-.alpha.-aspartyl-L-leucyl-L-seryl-
      L-lysyl-L-glutaminyl-L-methionyl-L-.alpha.-glutamyl-L-.alpha.-
      glutamyl-L-.alpha.-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-
      phenylalanyl-L-isoleucyl-L-.alpha.-glutamyl-L-tryptophyl-L-leucyl-L-
      lysyl-L-asparaginylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-
      alanyl-L-prolyl-L-prolyl-L-prolyl-L-seryl- (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN    19: PN: WO0069911 SEQID: 19 claimed protein
CI    MAN
SQL   40

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE    1:  134:13338

L1    ANSWER 8 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN    308249-28-7  REGISTRY
CN    Exendin 3 (Heloderma horridum), 39a-[N6-[15-(2,5-dihydro-2,5-dioxo-
      1H-pyrrol-1-yl)-1,7,13-trioxo-3,9-dioxa-6,12-diazapentadec-1-yl]-L-
      lysinamide]-, pentakis(trifluoroacetate) (salt) (9CI)  (CA INDEX
      NAME)
SQL   40

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE    1:  134:21425

L1    ANSWER 9 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN    308249-20-9  REGISTRY
```

```
CN   Exendin 3 (Heloderma horridum), 39a-[N6-[15-(2,5-dihydro-2,5-dioxo-
     1H-pyrrol-1-yl)-1,7,13-trioxo-3,9-dioxa-6,12-diazapentadec-1-yl]-L-
     lysinamide]- (9CI)  (CA INDEX NAME)
CI   COM, MAN
SQL  40

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

L1   ANSWER 10 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN   308249-19-6  REGISTRY
CN   Exendin 3 (Heloderma horridum), 39a-[N6-[3-(2,5-dihydro-2,5-dioxo-1H-
     pyrrol-1-yl)-1-oxopropyl]-L-lysinamide]-, pentakis(trifluoroacetate)
     (salt) (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   35: PN: WO0069911 PAGE: 68 claimed sequence
SQL  40

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  134:21425

REFERENCE   2:  134:13338

L1   ANSWER 11 OF 13  REGISTRY  COPYRIGHT 2003 ACS
RN   308245-55-8  REGISTRY
CN   Exendin 3 (Heloderma horridum), 39a-[N6-[3-(2,5-dihydro-2,5-dioxo-1H-
     pyrrol-1-yl)-1-oxopropyl]-L-lysinamide]- (9CI)  (CA INDEX NAME)
CI   COM, MAN
SQL  40

SEQ       1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPSK
            ========== ========== ========== ====
HITS AT:    1-34

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**

REFERENCE   1:  134:13338
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L1 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2003 ACS
RN 306277-48-5 REGISTRY
CN L-Serine, L-histidyl-L-seryl-L-.alpha.-aspartylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L-.alpha.-aspartyl-L-leucyl-L-seryl-L-lysyl-L-glutaminyl-L-methionyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-phenylalanyl-L-isoleucyl-L-.alpha.-glutamyl-L-tryptophyl-L-leucyl-L-lysyl-L-asparaginylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-alanyl-L-prolyl-L-prolyl-L-prolyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 11: PN: WO0069911 SEQID: 11 claimed protein
CN 185: PN: WO0069900 SEQID: 364 unclaimed protein
CN 1: PN: WO0151078 SEQID: 1 unclaimed protein
CN 2: PN: WO0066138 PAGE: 13 unclaimed protein
CN 3: PN: US6284725 SEQID: 7 unclaimed protein
CN 3: PN: WO0066142 TABLE: 1 unclaimed protein
CN 5: PN: WO0077039 TABLE: 1 unclaimed protein
CI MAN
SQL 39

SEQ 1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPS
========== ========== ========== ====
HITS AT: 1-34

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 135:205920

REFERENCE 2: 135:132445

REFERENCE 3: 134:51920

REFERENCE 4: 134:21425

REFERENCE 5: 134:13338

REFERENCE 6: 133:345167

REFERENCE 7: 133:345166

L1 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2003 ACS
RN 130357-25-4 REGISTRY
CN Exendin 3 (Heloderma horridum) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 11: PN: WO0041546 FIGURE: 1 claimed protein
CN 1: PN: WO0066629 FIGURE: 1 unclaimed sequence
CN 36: PN: WO0069911 PAGE: 69 claimed sequence
CN Exendin-3 (Heloderma horridum)
CN L-Serinamide, L-histidyl-L-seryl-L-.alpha.-aspartylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L-.alpha.-aspartyl-L-leucyl-L-seryl-L-lysyl-L-glutaminyl-L-methionyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-alanyl-L-valyl-L-arginyl-L-leucyl-L-phenylalanyl-L-isoleucyl-L-.alpha.-glutamyl-L-tryptophyl-L-leucyl-L-lysyl-L-asparaginylglycylglycyl-L-prolyl-L-seryl-L-serylglycyl-L-alanyl-L-prolyl-L-prolyl-L-prolyl-
CI MAN
SQL 39

SEQ 1 HSDGTFTSDL SKQMEEEAVR LFIEWLKNGG PSSGAPPPS
========== ========== ========== ====

HITS AT: 1-34

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 137:88643

REFERENCE 2: 135:376777

REFERENCE 3: 134:37033

REFERENCE 4: 134:13338

REFERENCE 5: 133:359242

REFERENCE 6: 133:135612

REFERENCE 7: 133:129880

REFERENCE 8: 128:192936

REFERENCE 9: 123:74913

REFERENCE 10: 121:222490

FILE 'HCAPLUS' ENTERED AT 14:27:42 ON 28 MAR 2003
L2 20 S L1

L2 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:832649 HCAPLUS
DOCUMENT NUMBER: 137:346934
TITLE: Methods for treating conditions associated with insulin resistance by administering a GLP-1 compound
INVENTOR(S): Holst, Jens Juul; Olsen, Mette Zander; Hathaway, David R.
PATENT ASSIGNEE(S): Restoragen, Inc., USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002085406	A1	20021031	WO 2002-US13088	20020424

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,

SN, TD, TG
PRIORITY APPLN. INFO.: US 2001-285699P P 20010424
AB The present invention relates to methods and compns. for treating insulin-assocd. conditions comprising administering a glucagon-like peptide-1 (GLP-1) compd. to subjects suffering therefrom. The insulin resistance-assocd. condition of the invention is type-2 pre-diabetes, atherosclerotic cardiovascular disease, drug-induced insulin resistance, congestive heart failure, diminished exercise capacity of skeletal muscle, and left ventricular dysfunction with cardiac metabolic myopathy or diminished exercise capacity of skeletal muscle; with the proviso that said congestive heart failure is not assocd. with toxic hypervolemia.
IT **474444-80-9**
RL: PRP (Properties)
(unclaimed protein sequence; methods for treating conditions assocd. with insulin resistance by administering a GLP-1 compd.)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:449715 HCAPLUS
DOCUMENT NUMBER: 137:28591
TITLE: Preparation of GLP-1 fusion proteins for use in treating diabetes mellitus and other conditions
INVENTOR(S): Glaesner, Wolfgang; Micanovic, Radmilla; Tschang, Sheng-Hung Rainbow
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 200 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002046227	A2	20020613	WO 2001-US43165	20011129
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002026897	A5	20020618	AU 2002-26897	20011129
PRIORITY APPLN. INFO.:			US 2000-251954P P	20001207
			WO 2001-US43165 W	20011129

OTHER SOURCE(S): MARPAT 137:28591
AB The present invention relates to glucagon-like peptide-1 compds. fused to proteins that have the effect of extending the in vivo half-life of the peptides. The heterologous fusion proteins of the invention comprise a GLP-1 compd. fused to human albumin, a human albumin analog or fragment, the Fc portion of an Ig, or an analog or

fragment of the Fc portion of an Ig. These fusion proteins can be used to treat non-insulin dependent diabetes mellitus as well as a variety of other conditions. Pharmaceutical formulations contg. the fusion proteins and polynucleotides encoding the proteins are also claimed.

IT **437134-20-8**
RL: PRP (Properties)
(unclaimed protein sequence; prepn. of GLP-1 fusion proteins for use in treating diabetes mellitus and other conditions)

L2 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:361520 HCAPLUS
DOCUMENT NUMBER: 137:88643
TITLE: Endoproteolysis by isolated membrane peptidases reveal metabolic stability of glucagon-like peptide-1 analogs, exendins-3 and -4
AUTHOR(S): Thum, A.; Hupe-Sodmann, K.; Goke, R.; Voigt, K.; Goke, B.; McGregor, G. P.
CORPORATE SOURCE: Institute of Physiology, Philipps-University, Marburg, D-35037, Germany
SOURCE: Experimental and Clinical Endocrinology & Diabetes (2002), 110(3), 113-118
CODEN: ECEDFQ; ISSN: 0947-7349
PUBLISHER: Johann Ambrosius Barth
DOCUMENT TYPE: Journal
LANGUAGE: English

AB These in vitro studies aimed to characterize the pattern and the kinetics of endoproteolysis of the insulinotropic hormone glucagon-like peptide-1 (GLP-1) and related peptides by native ectopeptidases. Peptides were incubated with isolated rat or pig kidney brush-border microvilli membranes, which are a rich source of the ectopeptidases that are responsible for the post-secretory metab. of peptide hormones. The proteolytic products were sepd. by reversed-phase HPLC column chromatog. and characterized by mol. mass and primary structure. The relative importance of specific peptidases was established by measuring the effects of specific peptidase inhibitors on the kinetics of proteolysis. Dipeptidyl-peptidase-IV was found to be rate-limiting in the endoproteolysis of GLP-1. GLP-1 homologs, exendins-3 and -4, exhibited exceptional stability in the presence of isolated kidney microvilli membranes. Our finding that exendin-4 is several orders of magnitude more stable than GLP-1 and Ser-8-GLP-1 is esp. noteworthy given this peptide's widely reported insulinotropic potency.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: BSU (Biological study, unclassified); PKT (Pharmacokinetics); BIOL (Biological study)
(endoproteolysis by isolated membrane peptidases reveal metabolic stability of glucagon-like peptide-1 analogs and exendin-3 and -4)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:332051 HCAPLUS
DOCUMENT NUMBER: 136:350560
TITLE: Treatment of hibernating myocardium and diabetic

cardiomyopathy with a GLP-1 peptide
INVENTOR(S): Ehlers, Mario
PATENT ASSIGNEE(S): Coolidge, Thomas R., USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002034285	A2	20020502	WO 2001-US32559	20011022
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002014618	A5	20020506	AU 2002-14618	20011022
US 2002146405	A1	20021010	US 2001-982978	20011022

PRIORITY APPLN. INFO.:
US 2000-241834P P 20001020
US 2000-242139P P 20001023
US 2000-245234P P 20001103
WO 2001-US32559 W 20011022

AB Hibernating myocardium is characterized by viable myocardium with impaired function due to localized reduced perfusion. Hibernating myocytes retain cellular integrity, but cannot sustain high-energy requirements of contraction. High plasma levels of catecholamines, such as norepinephrine, are believed to be predictive of mortality from hibernating myocardium. Likewise, high levels of catecholamines lead to cardiomyopathy in patients with diabetes. GLP-1 reduces plasma norepinephrine levels, and it thus is useful in a method of treating hibernating myocardium or diabetic cardiomyopathy.

IT **421042-94-6**
RL: PRP (Properties)
(unclaimed protein sequence; treatment of hibernating myocardium and diabetic cardiomyopathy with a GLP-1 peptide)

L2 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:850956 HCAPLUS
DOCUMENT NUMBER: 135:376777
TITLE: Peptide pharmaceutical formulations
INVENTOR(S): Holmquist, Barton; Dormady, Daniel C.
PATENT ASSIGNEE(S): Bionebraska, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001087322	A2	20011122	WO 2001-US15872	20010517
WO 2001087322	A3	20020718		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002061838	A1	20020523	US 2001-858880	20010517

PRIORITY APPLN. INFO.: US 2000-205377P P 20000517
US 2000-205262P P 20000519

AB A pharmaceutical compn. for administration to a mammal is disclosed. The compn. includes a therapeutically effective amt. of a peptide, such as a GLP-1 mol., a PTH mol., or a GRF mol. The compn. further includes a buffer including a weak acid having an acid dissocn. const. value of greater than about 1x10-5, such as acetic acid. The compn. also includes an excipient for making the compn. generally isotonic, such as D-mannitol.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(peptide pharmaceutical formulations relating to parathormone, glucagon-like peptide-1, and growth hormone-releasing factor)

L2 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:650487 HCAPLUS
DOCUMENT NUMBER: 135:205920
TITLE: Metabolic intervention with GLP-1 to improve the function of ischemic and reperfused tissue
INVENTOR(S): Coolidge, Thomas R.; Ehlers, Mario R. W.
PATENT ASSIGNEE(S): BioNebraska, Inc., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6284725	B1	20010904	US 1999-302596	19990430
WO 2000066138	A2	20001109	WO 2000-US11251	20000427
WO 2000066138	A3	20010705		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1173197		A2	20020123	EP 2000-926404	20000427
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NZ 514610		A	20020927	NZ 2000-514610	20000427
JP 2002543142		T2	20021217	JP 2000-615022	20000427
US 2002055460		A1	20020509	US 2001-851738	20010509
US 2002147131		A1	20021010	US 2001-953021	20010911
NO 2001005294		A	20011228	NO 2001-5294	20011029

PRIORITY APPLN. INFO.:

US 1998-103498P	P	19981008
US 1999-302596	A	19990430
WO 2000-US11251	W	20000427
US 2001-851738	A1	20010509

AB Individuals in need of treatment of ischemia-related reperfusion are treated, preferably i.v., with a compn. which includes a compd. which binds to a receptor for the glucagon-like peptide-1. The invention relates to both the method and compns. for such treatment.

IT **306277-48-5**
RL: PRP (Properties)
(unclaimed protein sequence; metabolic intervention with GLP-1 to improve the function of ischemic and reperfused tissue)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:	2001:525943 HCAPLUS
DOCUMENT NUMBER:	135:132445
TITLE:	Use of exendins and agonists thereof for modulation of triglyceride levels and treatment of dyslipidemia
INVENTOR(S):	Kolterman, Orville Gene; Young, Andrew A.
PATENT ASSIGNEE(S):	Amylin Pharmaceuticals, Inc., USA
SOURCE:	PCT Int. Appl., 161 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051078	A1	20010719	WO 2001-US719	20010109
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1246638	A1	20021009	EP 2001-900978	20010109
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

US 2003036504 A1 20030220 US 2001-756690 20010109
PRIORITY APPLN. INFO.: US 2000-175365P P 20000110
WO 2001-US719 W 20010109

AB Methods for modulating the levels of plasma triglyceride and other lipids in a subject comprise administration of an effective amt. of an exendin or exendin agonist, alone or in conjunction with other compds. or compns. that lower blood triglyceride and/or other lipid levels.

IT **306277-48-5**
RL: PRP (Properties)
(unclaimed protein sequence; use of exendins and agonists thereof for modulation of triglyceride levels and treatment of dyslipidemia)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:900675 HCAPLUS
DOCUMENT NUMBER: 134:51920
TITLE: GLP-1 as a diagnostic test to determine .beta.-cell function and the presence of impaired glucose tolerance (IGT) and type-II diabetes
INVENTOR(S): Holst, J. J.; Vilsboll, Tina
PATENT ASSIGNEE(S): Bionebraska, Inc., USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000077039	A2	20001221	WO 2000-US16428	20000614
WO 2000077039	A3	20010329		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6344180	B1	20020205	US 1999-333415	19990615
EP 1185308	A2	20020313	EP 2000-939881	20000614
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-333415 A 19990615
WO 2000-US16428 W 20000614

AB Since glucagon-like peptide-1 (GLP-1) is the most potent insulinotropic hormone known and has been shown to stimulate insulin secretion strongly in patients with type II diabetes, this invention uses GLP-1 or its biol. active analogs in .beta.-cell stimulatory tests in order to test .beta.-cell function in a simple way. The test provides information about insulin secretory capacity, is easy

and reproducible and has insignificant side effects.

IT **306277-48-5**
RL: PRP (Properties)
(unclaimed protein sequence; gLP-1 as a diagnostic test to det. .beta.-cell function and the presence of impaired glucose tolerance (IGT) and type-II diabetes)

L2 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:861704 HCAPLUS
DOCUMENT NUMBER: 134:37033
TITLE: Use of exendins and agonists thereof for the treatment of gestational diabetes mellitus
INVENTOR(S): Hiles, Richard; Prickett, Kathryn S.
PATENT ASSIGNEE(S): Amylin Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 133 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000073331	A2	20001207	WO 2000-US14231	20000523
WO 2000073331	A3	20010628		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6506724	B1	20030114	US 1999-323867	19990601
EP 1181043	A2	20020227	EP 2000-937710	20000523
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003501361	T2	20030114	JP 2001-500655	20000523

PRIORITY APPLN. INFO.: US 1999-323867 A 19990601
WO 2000-US14231 W 20000523

AB Methods for treating gestational diabetes which comprise administration of an effective amt. of an exendin or an exendin agonist, alone or in conjunction with other compds. or compns. that lower blood glucose levels.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of exendins and agonists thereof for treatment of gestational diabetes mellitus in relation to combination with insulin or amylin agonist)

L2 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:824301 HCAPLUS
DOCUMENT NUMBER: 134:13338
TITLE: Long lasting insulinotropic peptides
INVENTOR(S): Bridon, Dominique P.; L'Archeveque, Benoit;

Ezrin, Alan M.; Holmes, Darren L.; Leblanc, Anouk; St. Pierre, Serge

PATENT ASSIGNEE(S): Conjuchem, Inc., Can.
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000069911	A1	20001123	WO 2000-US13563	20000517
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2000070665	A2	20001123	WO 2000-IB763	20000517
WO 2000070665	A3	20010419		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1171582	A2	20020116	EP 2000-929748	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1180121	A1	20020220	EP 2000-930796	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000010750	A	20020226	BR 2000-10750	20000517
AU 754770	B2	20021121	AU 2000-48555	20000517
EP 1264840	A1	20021211	EP 2002-14617	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003500341	T2	20030107	JP 2000-619018	20000517
US 6329336	B1	20011211	US 2000-623618	20000905
US 6514500	B1	20030204	US 2000-657332	20000907
US 2002049153	A1	20020425	US 2001-876388	20010606
NO 2001005584	A	20020103	NO 2001-5584	20011115

PRIORITY APPLN. INFO.:
US 1999-134406P P 19990517
US 1999-159783P P 19991015
US 1999-153406P P 19990910
EP 2000-932570 A3 20000517
WO 2000-IB763 W 20000517
WO 2000-US13563 W 20000517
US 2000-623618 A3 20000905

AB Modified insulinotropic peptides are disclosed. The modified

insulinotropic peptides are capable of forming a peptidase stabilized insulinotropic peptide. The modified insulinotropic peptides are capable of forming covalent bonds with one or more blood components to form a conjugate. The conjugates may be formed in vivo or ex vivo. The modified peptides are administered to treat humans with diabetes and other related diseases.

IT **306277-48-5 308245-55-8 308806-01-1 309729-80-4**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(long lasting insulinotropic peptides with antidiabetic activity)

IT **130357-25-4P**, Exendin 3 (Heloderma horridum) **308249-19-6P 309729-82-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(long lasting insulinotropic peptides with antidiabetic activity)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:824291 HCAPLUS
DOCUMENT NUMBER: 134:21425
TITLE: Protection of endogenous therapeutic peptides from peptidase activity through conjugation to blood components
INVENTOR(S): Bridon, Dominique P.; Ezrin, Alan M.; Milner, Peter G.; Holmes, Darren L.; Thibaudeau, Karen
PATENT ASSIGNEE(S): Conjuchem, Inc., Can.
SOURCE: PCT Int. Appl., 733 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000069900	A2	20001123	WO 2000-US13576	20000517
WO 2000069900	A3	20010215		
WO 2000069900	C2	20020704		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2000070665	A2	20001123	WO 2000-IB763	20000517
WO 2000070665	A3	20010419		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1105409	A2	20010613	EP 2000-936023	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1171582	A2	20020116	EP 2000-929748	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1264840	A1	20021211	EP 2002-14617	20000517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003500341	T2	20030107	JP 2000-619018	20000517
JP 2003508350	T2	20030304	JP 2000-618316	20000517
US 6514500	B1	20030204	US 2000-657332	20000907

PRIORITY APPLN. INFO.:

US 1999-134406P	P	19990517
US 1999-153406P	P	19990910
US 1999-159783P	P	19991015
EP 2000-932570	A3	20000517
WO 2000-IB763	W	20000517
WO 2000-US13576	W	20000517

AB A method for protecting a peptide from peptidase activity in vivo, the peptide being composed of between 2 and 50 amino acids and having a C-terminus and an N-terminus and a C-terminus amino acid and an N-terminus amino acid is described. In the first step of the method, the peptide is modified by attaching a reactive group to the C-terminus amino acid, to the N-terminus amino acid, or to an amino acid located between the N-terminus and the C-terminus, such that the modified peptide is capable of forming a covalent bond in vivo with a reactive functionality on a blood component. The solid phase peptide synthesis of a no. of derivs. with 3-maleimidopropionic acid (3-MPA) is described. In the next step, a covalent bond is formed between the reactive group and a reactive functionality on a blood component to form a peptide-blood component conjugate, thereby protecting said peptide from peptidase activity. The final step of the method involves the analyzing of the stability of the peptide-blood component conjugate to assess the protection of the peptide from peptidase activity. Thus, the percentage of a K5 kringle peptide (Pro-Arg-Lys-Leu-Tyr-Asp-Lys-NH2) conjugated to human serum albumin via MPA remained relatively const. through a 24-h plasma assay in contrast to unmodified K5 which decreased to 9% of the original amt. of K5 in only 4 h in plasma.

IT **308249-19-6P 308249-28-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(protection of endogenous therapeutic peptides from peptidase activity through conjugation to blood components)

IT **306277-48-5 309257-17-8**
RL: PRP (Properties)
(unclaimed protein sequence; protection of endogenous therapeutic peptides from peptidase activity through conjugation to blood components)

L2 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:790546 HCAPLUS
DOCUMENT NUMBER: 133:359242

TITLE: Modified exendins and exendin agonists
INVENTOR(S): Young, Andrew; Prickett, Kathryn
PATENT ASSIGNEE(S): Amylin Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066629	A1	20001109	WO 2000-US11814	20000428
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1175443	A1	20020130	EP 2000-928685	20000428
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000010705	A	20020205	BR 2000-10705	20000428
JP 2002544127	T2	20021224	JP 2000-615657	20000428

PRIORITY APPLN. INFO.: US 1999-132018P P 19990430
WO 2000-US11814 W 20000428

AB Novel modified exendins and exendin agonists having an exendin or exendin agonist linked to one or more polyethylene glycol polymers, for example, and related formulations and dosages and methods of administration thereof are provided. These modified exendins and exendin agonists, compns. and methods are useful in treating diabetes and conditions that would be benefited by lowering plasma glucose or delaying and/or slowing gastric emptying or inhibiting food intake.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: PRP (Properties)
(unclaimed sequence; modified exendins and exendin agonists)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:790326 HCAPLUS
DOCUMENT NUMBER: 133:345167
TITLE: Metabolic intervention with GLP-1 or its biologically active analogues to improve the function of the ischemic and reperfused brain
INVENTOR(S): Coolidge, Thomas R.; Ehlers, Mario R. W.
PATENT ASSIGNEE(S): Bionebraska, Inc., USA
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066142	A2	20001109	WO 2000-US11652	20000501
WO 2000066142	A3	20020124		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6429197	B1	20020806	US 1999-303016	19990430
EP 1187628	A2	20020320	EP 2000-928616	20000501
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002543145	T2	20021217	JP 2000-615026	20000501
NO 2001005298	A	20011228	NO 2001-5298	20011029

PRIORITY APPLN. INFO.:
US 1999-303016 A 19990430
US 1998-103498P P 19981008
WO 2000-US11652 W 20000501

AB It has now been discovered that GLP-1 treatment after acute stroke or hemorrhage, preferably i.v. administration, can be an ideal treatment because it provides a means for optimizing insulin secretion, increasing brain anabolism, enhancing insulin effectiveness by suppressing glucagon, and maintaining euglycemia or mild hypoglycemia with no risk of severe hypoglycemia.

IT **306277-48-5**
RL: PRP (Properties)
(unclaimed protein sequence; metabolic intervention with GLP-1 or its biol. active analogs to improve the function of the ischemic and reperfused brain)

L2 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:790323 HCAPLUS
DOCUMENT NUMBER: 133:345166
TITLE: Metabolic intervention with GLP-1 to improve the function of ischemic and reperfused tissue
INVENTOR(S): Coolidge, Thomas R.; Ehlers, Mario R. W.
PATENT ASSIGNEE(S): Bionebraska, Inc., USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066138	A2	20001109	WO 2000-US11251	20000427
WO 2000066138	A3	20010705		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,				

YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6284725	B1	20010904	US 1999-302596	19990430	
EP 1173197	A2	20020123	EP 2000-926404	20000427	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
NZ 514610	A	20020927	NZ 2000-514610	20000427	
JP 2002543142	T2	20021217	JP 2000-615022	20000427	
NO 2001005294	A	20011228	NO 2001-5294	20011029	
PRIORITY APPLN. INFO.:			US 1999-302596 A	19990430	
			US 1998-103498P P	19981008	
			WO 2000-US11251 W	20000427	

AB Individuals in need of treatment of ischemia-related reperfusion are treated, preferably i.v., with a compn. which includes a compd. which binds to a receptor for the glucagon-like peptide-1. The invention relates to both the method and compns. for such treatment.

IT **306277-48-5**
RL: PRP (Properties)
(unclaimed sequence; metabolic intervention with GLP-1 to improve the function of ischemic and reperfused tissue)

L2 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:493318 HCAPLUS
DOCUMENT NUMBER: 133:129880
TITLE: Methods using an exendin or related substance for glucagon suppression
INVENTOR(S): Young, Andrew; Gedulin, Bronislava
PATENT ASSIGNEE(S): Amylin Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041548	A2	20000720	WO 2000-US942	20000114
WO 2000041548	A3	20001130		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2356331	AA	20000720	CA 2000-2356331	20000114
EP 1143989	A2	20011017	EP 2000-902415	20000114
EP 1143989	A3	20020911		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000007823	A	20011120	BR 2000-7823	20000114
JP 2002538084	T2	20021112	JP 2000-593169	20000114
NO 2001003469	A	20010914	NO 2001-3469	20010712

PRIORITY APPLN. INFO.: US 1999-116380P P 19990114
US 1999-132017P P 19990430
US 2000-175365P P 20000110
WO 2000-US942 W 20000114

AB Methods are provided for use of an exendin, an exendin agonist, or a modified exendin or exendin agonist having an exendin or exendin agonist linked to one or more polyethylene glycol polymers, for example, for lowering glucagon levels and/or suppressing glucagon secretion in a subject. These methods are useful in treating hyperglucagonemia and other conditions that would be benefited by lowering plasma glucagon or suppressing glucagon secretion.

IT **130357-25-4P**, Exendin 3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(exendin or related substance for glucagon suppression)

L2 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:493315 HCAPLUS
DOCUMENT NUMBER: 133:135612
TITLE: Novel exendin agonist formulations and methods of administration thereof
INVENTOR(S): Young, Andrew; L'Italien, James J.; Kolterman, Orville
PATENT ASSIGNEE(S): Amylin Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 281 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041546	A2	20000720	WO 2000-US902	20000114
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2356706	AA	20000720	CA 2000-2356706	20000114
EP 1140145	A2	20011010	EP 2000-914425	20000114
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000007820	A	20011120	BR 2000-7820	20000114
JP 2002534450	T2	20021015	JP 2000-593167	20000114
NO 2001003468	A	20010914	NO 2001-3468	20010712

PRIORITY APPLN. INFO.: US 1999-116380P P 19990114
US 2000-175365P P 20000110
WO 2000-US902 W 20000114

AB Novel exendin and exendin agonist compd. formulations and dosages and methods of administration thereof are provided. These compns. and methods are useful in treating diabetes and conditions that

would be benefited by lowering plasma glucose or delaying and/or slowing gastric emptying or inhibiting food intake.

IT **130357-25-4P**, Exendin-3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(amino acid sequence; novel exendin agonist formulations and methods of administration thereof as antidiabetic agents and appetite suppressants)

L2 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:112250 HCAPLUS
DOCUMENT NUMBER: 128:192936
TITLE: Preparation of exendin peptide analogs as agonists for regulating gastrointestinal motility
INVENTOR(S): Young, Andrew A.; Gedulin, Bronislava; Beeley, Nigel Robert Arnold; Prickett, Kathryn S.
PATENT ASSIGNEE(S): Amylin Pharmaceuticals, Inc., USA; Young, Andrew A.; Gedulin, Bronislava; Beeley, Nigel Robert Arnold; Prickett, Kathryn S.
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9805351	A1	19980212	WO 1997-US14199	19970808
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9740636	A1	19980225	AU 1997-40636	19970808
EP 966297	A1	19991229	EP 1997-938261	19970808
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001501593	T2	20010206	JP 1998-508263	19970808

PRIORITY APPLN. INFO.: US 1996-694954 A 19960808
WO 1997-US14199 W 19970808
OTHER SOURCE(S): MARPAT 128:192936

AB Methods for reducing gastric motility and delaying gastric emptying for therapeutic and diagnostic purposes are disclosed which comprise administration of an effective amt. of an exendin or an exendin agonist H-Xaa1-Xaa2-Xaa3-Gly-Thr-Xaa4-Xaa5-Xaa6-Xaa7-Xaa8-Ser-Lys-Gln-Xaa9-Glu-Glu-Glu-Ala-Val-Arg-Leu-Xaa10-Xaa11-Xaa12-Xaa13-Leu-Lys-Asn-Gly-Gly-Xaa14-Ser-Ser-Gly-Ala-Xaa15-Xaa16-Xaa17-Xaa18-Z [Xaa1 = His, Arg, Tyr; Xaa2 = Ser, Gly, Ala, Thr; Xaa3, Xaa7, Xaa12 = independently Asp, Glu; Xaa4, Xaa10 = independently Phe, Tyr,

naphthylalanine; Xaa5, Xaa6 = independently Thr, Ser; Xaa8, Xaa9 = independently Leu, Ile, Val, pentylglycine, Met; Xaa11 = any group Xaa8, tert-butylglycine; Xaa13 = any group Xaa4, Trp; Xaa14-Xaa17 = independently Pro, homoproline, 3-Hyp, 4-Hyp, thioproline, N-alkylglycine, N-alkylpentylglycine, N-alkylalanine; Xaa18 = Ser, Thr, Tyr; Z = OH, NH2; with the proviso that the compd. does not have the formula of exendin-3 or exendin-4] or a pharmaceutically acceptable salt thereof. Methods for treating conditions assocd. with elevated, inappropriate, or undesired post-prandial blood glucose levels are disclosed which comprise administration of an effective amt. of an exendin or an exendin agonist alone or in conjunction with other anti-gastric emptying agents. Thus, exendin-4 acid and [Leu14,Phe25]-exendin-4, prepd. by std. solid-phase methods on a 4-(2,4-dimethoxyphenyl)-Fmoc-aminomethylphenoxyacetamide norleucine-MBHA resin using 9-fluorenylmethoxycarbonyl (Fmoc)-protected amino acids, inhibited gastric emptying in male HSD rats with EC50 = 0.12 and 0.29 .mu.g. Exendin-4 showed EC50 = 0.27 .mu.g under the same conditions.

IT **130357-25-4P**, Exendin-3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of exendin peptide analogs as agonists for regulating gastrointestinal motility)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:675100 HCAPLUS
DOCUMENT NUMBER: 123:74913
TITLE: Exendin-3 and exendin-4 polypeptides, and pharmaceutical compositions comprising them
INVENTOR(S): Eng, John
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 17 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5424286	A	19950613	US 1993-66480	19930524

PRIORITY APPLN. INFO.: US 1993-66480 19930524

AB This invention encompasses pharmaceutical compns. contg. exendin-3 or exendin-4, fragments thereof, or any combination thereof, and methods for the treatment of diabetes mellitus and the prevention of hyperglycemia.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(exendin-3 and exendin-4 polypeptides, and pharmaceutical compns. comprising them)

L2 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:622490 HCAPLUS
DOCUMENT NUMBER: 121:222490
TITLE: Use of 125I-[Y39]exendin-4 to characterize exendin receptors on dispersed pancreatic acini and gastric chief cells from guinea pig
AUTHOR(S): Singh, Gurcharn; Eng, John; Raufman, Jean-Pierre
CORPORATE SOURCE: Gastrointestinal Cell Biology Laboratory, State University of New York-Health Science Center at Brooklyn, 450 Clarkson Avenue-Box 1196, Brooklyn, NY, 11203-2098, USA
SOURCE: Regulatory Peptides (1994), 53(1), 47-59
CODEN: REPPDY; ISSN: 0167-0115
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We synthesized and iodinated an exendin-4 analog, [Y39]exendin-4 (700 Ci/mmol), for use as a radioligand to characterize exendin receptors on dispersed pancreatic acini and gastric chief cells from guinea pig. Binding of this bioactive radioligand was rapid, temp.-dependent and specific (not inhibited by other pancreatic or gastric secretagogues). Measurement of the ability of exendin-4 to inhibit the binding of 125I-[Y39]exendin-4 indicated the presence of two classes of receptors. Pancreatic acini had 12.5 .times. 1010 binding sites/mg acinar protein of which 6% were high affinity (Kd = 0.5 nM) and 94% were low affinity (Kd = 0.1 .mu.M). Chief cells had 3370 binding sites/cell of which 9% were high affinity (Kd = 0.3 nM) and 91% were low affinity (Kd = 0.2 .mu.M). Washing with 0.2 M acetic acid (pH 2.5), 0.2 M glycine (pH 10.5), or trypsin (100 .mu.g/mL) after 30 min incubation at 37.degree., indicated that 63 and 49% of radioligand was internalized in acini and chief cells, resp. Truncated glucagon-like peptide-1 (tGLP-1), a mammalian peptide sharing 53% homol. with exendin-4, inhibited radioligand binding at the same concns. that altered secretion from acini and chief cells. Glucagon, GLP-1 and GLP-2 inhibited 125I-[Y39]exendin-4 binding only at concns. .gtoreq.100 nM. Exendin(9-39)NH2, a specific exendin-receptor antagonist, potently inhibited 125I-[Y39] exendin-4 binding (IC50 = 6.1 and 3.5 nM in acini and chief cells, resp.). In pancreatic acini and gastric chief cells from guinea pig, exendin-3, exendin-4 and tGLP-1 increase cellular cAMP and modulate enzyme secretion by interacting with high-affinity exendin receptors. 125I-[Y39] exendin-4 is a useful radioligand for studying exendin receptors.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cAMP formation and enzyme secretion by pancreas acinus and stomach chief cells response to)

L2 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:608593 HCAPLUS
DOCUMENT NUMBER: 113:208593
TITLE: Purification and structure of exendin-3, a new pancreatic secretagogue isolated from Heloderma horridum venom
AUTHOR(S): Eng, John; Andrews, P. C.; Kleinman, Wayne A.; Singh, Latika; Raufman, Jean Pierre
CORPORATE SOURCE: Solomon A. Berson Res. Lab., Veterans Aff. Med. Cent., Bronx, NY, 10468, USA

SOURCE: Journal of Biological Chemistry (1990), 265(33), 20259-62
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An assay for His1 peptides performed by amino-terminal amino acid sequencing was used to screen venom from the Gila monster lizard, H. horridum. Two His1 peptides were identified: helospectin and a new His1 peptide that has been named exendin-3 to indicate that it is the third peptide to be found in an exocrine secretion of Heloderma lizards which has endocrine activity, the first two being helospectin (exendin-1) and helodermin (exendin-2). In the lot of H. horridum venom tested, exendin-3 was 5-10-fold more abundant in molar concn. than helospectin. The structure of exendin-3 was analyzed by amino acid sequencing and mass spectrometry. Exendin-3 is a 39-amino acid peptide with a mass of 4200. It contains a carboxyl-terminal amide and has a strong homol. with secretin at its amino-terminal 12 amino acids. The complete structure of exendin-3 is: His-Ser-Asp-Gly-Thr-Phe-Thr-Ser-Asp-Leu-Ser-Lys-Gln-Met-Glu-Glu-Glu-Ala-Val-Arg-Leu-Phe-Ile-Glu-Trp-Leu-Lys-Asn-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser. It is 32 and 26% homologous with helospectin and helodermin, resp. It has greatest homol. with glucagon (48%) and human glucagon-like peptide-1 (50%). Exendin-3 (3 .mu.M) stimulated increases in cellular cAMP and amylase release from dispersed guinea pig pancreatic acini.

IT **130357-25-4**, Exendin 3 (Heloderma horridum)
RL: PRP (Properties)
(amino acid sequence of)

FILE 'HOME' ENTERED AT 14:27:54 ON 28 MAR 2003

Jiang, D.
09/756,690
Seq. ID 1

GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 28, 2003, 08:25:12 ; Search time 74 Seconds
(without alignments)
70.227 Million cell updates/sec

Title: US-09-756-690A-1
Perfect score: 208
Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	208	100.0	39	16	AAR80545	Heloderma horridum
2	208	100.0	39	19	AAW61769	Exendin-3, for use
3	208	100.0	39	19	AAW47608	Gila monster exend
4	208	100.0	39	20	AAY31501	Exendin-3 peptide
5	208	100.0	39	20	AAY03717	Amino acid sequenc
6	208	100.0	39	21	AAB11281	H. horridum exendi
7	208	100.0	39	21	AAB52871	Mexican beaded liz
8	208	100.0	39	21	AAY94010	Amino acid sequenc
9	208	100.0	39	22	AAU07378	Glucagon-like pept
10	208	100.0	39	22	AAE08345	Heloderma horridum
11	208	100.0	39	22	AAB91190	Pancreatic hormone
12	208	100.0	39	22	AAB60252	Gila monster venom
13	208	100.0	39	22	AAB64181	Mexican beaded liz
14	208	100.0	39	22	AAB48800	Exendin-3, SEQ ID
15	208	100.0	39	22	AAB36419	Gila monster venom
16	208	100.0	39	22	AAB36432	Gila monster venom
17	208	100.0	39	22	AAB85925	Gila monster venom
18	208	100.0	39	23	ABB80100	Glucagon like pept
19	208	100.0	39	23	AAE14425	Gila monster exend
20	208	100.0	39	23	ABB07149	Gila monster venom
21	208	100.0	40	22	AAB91199	Pancreatic hormone
22	208	100.0	40	22	AAB48808	Insulinotropic pep
23	208	100.0	40	22	AAB48823	Exendin-3(1-39)Lys
24	204	98.1	39	21	AAB11288	exendin agonist pe
25	204	98.1	39	21	AAY94018	Amino acid sequenc
26	204	98.1	39	22	AAE08358	Exendin agonist pe
27	200	96.2	39	16	AAR80546	Heloderma suspectu
28	200	96.2	39	19	AAW61770	Exendin-4, for use
29	200	96.2	39	19	AAW47609	Gila monster exend
30	200	96.2	39	20	AAY31502	Exendin-4 peptide
31	200	96.2	39	20	AAY03718	Amino acid sequenc
32	200	96.2	39	21	AAB11282	H. suspectum exend
33	200	96.2	39	21	AAB11305	exendin agonist pe
34	200	96.2	39	21	AAB11306	exendin agonist pe
35	200	96.2	39	21	AAB11307	exendin agonist pe
36	200	96.2	39	21	AAB11308	exendin agonist pe
37	200	96.2	39	21	AAB52840	Extendin-4 peptide
38	200	96.2	39	21	AAB52841	Extendin-4 peptide
39	200	96.2	39	21	AAB52842	Extendin-4 peptide
40	200	96.2	39	21	AAB52857	Extendin-4 peptide
41	200	96.2	39	21	AAB52858	Extendin-4 peptide
42	200	96.2	39	21	AAB52872	Gila monster exten
43	200	96.2	39	21	AAY94011	Amino acid sequenc
44	200	96.2	39	21	AAY78957	Extendin-4 (1-39)
45	200	96.2	39	22	AAU07380	Glucagon-like pept

ALIGNMENTS

RESULT 1
AAR80545
ID AAR80545 standard; peptide; 39 AA.
XX
AC AAR80545;
XX
DT 27-FEB-1996 (first entry)
XX
DE Heloderma horridum exendin-3.
XX
KW Exendin-3; diabetes mellitus; hyperglycaemia; insulinotropic peptide.
XX
OS Heloderma horridum.
XX
PN US5424286-A.
XX
PD 13-JUN-1995.
XX
PF 24-MAY-1993; 93US-0066480.
XX
PR 24-MAY-1993; 93US-0066480.
XX
PA (ENGJ/) ENG J.
XX
PI Eng J;
XX
DR WPI; 1995-262627/34.
XX
PT Stimulating/inhibiting insulin release with exendin polypeptide(s) -
PT for treating diabetes mellitus and preventing hyperglycaemia.
XX
PS Claim 5; Columns 13-14; 17pp; English.
XX

```
CC   AAR80545 is Heloderma horridum exendin-3. It is an
CC   insulinotropic peptide, and can therefore be used in the treatment of
CC   diabetes mellitus (types I or II), and for the prevention of
CC   hyperglycaemia. It normalises hyperglycaemia through glucose-dependent
CC   and insulin-(in)dependent mechanisms.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 16;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 2
AAW61769
ID   AAW61769 standard; peptide; 39 AA.
XX
AC   AAW61769;
XX
DT   29-MAR-1999  (first entry)
XX
DE   Exendin-3, for use in treating disorders related to food intake.
XX
KW   Exendin; obesity; type II diabetes; eating disorders; cardiac disease;
KW   insulin resistance syndrome; elevated plasma glucose level; agonist.
XX
OS   Heloderma horridum.
XX
PN   WO9830231-A1.
XX
PD   16-JUL-1998.
XX
PF   07-JAN-1998;   98WO-US00449.
XX
PR   14-NOV-1997;   97US-0066029.
PR   07-JAN-1997;   97US-0034905.
PR   08-AUG-1997;   97US-0055404.
PR   14-NOV-1997;   97US-0065442.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Beeley NRA,  Bhavsar S,  Prickett KS;
XX
DR   WPI; 1998-398796/34.
XX
PT   Reducing food intake by administering exendins or their
PT   analogues - for treatment of e.g. obesity, type II diabetes,
PT   eating disorders and insulin resistance
XX
PS   Claims 16, 24; Page 8; 214pp; English.
XX
CC   The invention relates to a new method for treating disorders that
CC   are alleviated by reducing food intake, in particular obesity, type
CC   II diabetes, eating disorders, insulin resistance syndrome, elevated
CC   plasma glucose levels, or the risk of cardiac disease. The method
CC   comprises administering an exendin or an exendin agonist. The treatment
CC   reduces appetite and lowers plasma lipid levels. It inhibits food
CC   consumption as effectively as amylin or cholecystokinin but has a much
CC   longer-lasting action (still effective after 6 hours in a mouse model).
CC   The present sequence is that of exendin-3 which is one of the preferred
CC   compounds for use in the method.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 19;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 3
AAW47608
ID   AAW47608 standard; peptide; 39 AA.
XX
AC   AAW47608;
XX
DT   03-JUL-1998  (first entry)
XX
DE   Gila monster exendin-3.
XX
KW   Exendin agonist; gastric motility; gastric emptying; treatment;
KW   spasm; postprandial dumping syndrome; postprandial hyperglycaemia;
KW   type 1 diabetes; impaired glucose tolerance; toxin ingestion;
KW   obesity; Gila monster venom; exendin-3.
XX
OS   Heloderma horridum.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   39
FT                   /note= "amidated"
XX
PN   WO9805351-A1.
XX
PD   12-FEB-1998.
XX
PF   08-AUG-1997;   97WO-US14199.
XX
PR   08-AUG-1996;   96US-0694954.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Beeley NRA,  Gedulin B,  Prickett KS,  Young AA;
XX
DR   WPI; 1998-145351/13.
XX
PT   Regulating gastrointestinal motility using exendins or their
PT   agonists - for treating spasm, diabetic postprandial hyperglycaemia,
PT   impaired glucose tolerance etc., also in diagnostic investigations
XX
PS   Claims 20 and 21; Fig 1; 70pp; English.
XX
CC   AAW47549 describes a generic exendin agonist, provided that it does
CC   have the formula of either exendin-3 (AAW47608) or exendin-4
CC   (AAW47609).
CC   Exendin agonists, which reduce gastric motility and delay gastric
CC   emptying, can be used to treat spasm (where associated with acute
CC   diverticulitis or disorders of the biliary tract or sphincter of
CC   Oddi), postprandial dumping syndrome and hyperglycaemia
CC   (particularly associated with type 2 diabetes), type 1 diabetes,
CC   impaired glucose tolerance, toxin ingestion (an exendin agonist is
CC   administered to prevent stomach contents passing into the
CC   intestines, then the stomach pumped) and obesity. They can also be
CC   administered to subjects undergoing gastrointestinal diagnostic
CC   investigation, particularly radiological or by magnetic resonance
CC   imaging.
CC   Exendins, components of Gila monster venom, have some sequence
CC   similarity to glucagon-like peptides (GLP). They are GLP agonists
CC   and have been suggested (US5424286) for treatment of diabetes and
CC   prevention of hyperglycaemia.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 19;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
```

RESULT 4
AAY31501
ID AAY31501 standard; peptide; 39 AA.
XX
AC AAY31501;
XX
DT 08-NOV-1999 (first entry)
XX
DE Exendin-3 peptide sequence.
XX
KW Exendin; agonist; GLP-1; glucagon-like peptide; toxic hypervolemia;
KW diuresis; renal plasma flow; glomerular filtration rate; pre-eclampsia;
KW eclampsia of pregnancy; cardiac contractility; renal failure; diuretic;
KW congestive heart failure; nephrotic syndrome; pulmonary edema; cirrhosis;
KW hypertension; urine flow.
XX
OS Synthetic.
OS Heloderma horridum.
XX
FH Key Location/Qualifiers
FT Modified-site 39
FT /note= "C-terminal amide"
XX
PN WO9940788-A1.
XX
PD 19-AUG-1999.
XX
PF 05-FEB-1999; 99WO-US02554.
XX
PR 13-FEB-1998; 98US-0075122.
XX
PA (AMYL-) AMYLIN PHARM INC.
XX
PI Beeley NRA, Prickett K, Vine W, Young AA;
XX
DR WPI; 1999-527332/44.
XX
PT Increasing urine flow by administering peptides or peptide agonists
XX
PS Claim 14; Page 7; 94pp; English.
XX
CC The invention relates to new methods of increasing urine flow that
CC comprises administering an exendin or exendin agonist, or a GLP-1
CC (glucagon-like peptide) or GLP-1 agonist. The new methods using an
CC exendin, exendin agonist, GLP-1 or GLP-1 agonist are useful for
CC increasing urine flow, decreasing potassium concentration in urine,
CC preventing or alleviating a disorder associated with toxic hypervolemia
CC (renal failure, congestive heart failure, nephrotic syndrome, pulmonary
CC edema, cirrhosis, or hypertension). They can also be used for inducing
CC rapid diuresis, preparing an individual for surgical procedure,
CC increasing renal plasma flow and glomerular filtration rate, treating
CC pre-eclampsia or eclampsia of pregnancy, and increasing a condition/
CC disorder that can be alleviated by increasing cardiac contractility
CC (congestive heart failure, pulmonary edema, systemic edema or renal
CC failure). Unlike prior art diuretics, the new methods increase urine
CC excretion and sodium excretion without increasing potassium loss, and are
CC fast acting. They have a prolonged duration of action, are inotropic,
CC have a low toxicity, and are easily administered intravenously. The
CC present sequence represents an exendin-3 peptide which can be used in
CC the methods of the invention.
XX
SQ Sequence 39 AA;

Query Match 100.0%; Score 208; DB 20; Length 39;
Best Local Similarity 100.0%; Pred. No. 9.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
||||||||||||||||||||||||||||||||||||||||
Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

RESULT 5
AAY03717
ID AAY03717 standard; peptide; 39 AA.
XX
AC AAY03717;
XX
DT 08-JUN-1999 (first entry)
XX
DE Amino acid sequence of exendin-3.
XX
KW Exendin; agonist; diabetes; disorder; plasma glucose; gastric;
KW diagnostic; gastro-intestinal; radiological; generic.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 39
FT /note= "C-terminal amide"
XX
PN WO9907404-A1.
XX
PD 18-FEB-1999.
XX
PF 06-AUG-1998; 98WO-US16387.
XX
PR 08-AUG-1997; 97US-0055404.
XX
PA (AMYL-) AMYLIN PHARM INC.
XX
PI Beeley NRA, Prickett KS;
XX
DR WPI; 1999-180403/15.
XX
PT New exendin agonists - useful in the treatment of Type I and II
PT diabetes
XX
PS Disclosure; Fig 2; 70pp; English.
XX
CC The invention relates to exendin agonists which slow gastric emptying
CC and lower plasma glucose levels. The peptides are of the formula
CC Xaa1-Xaa2-
CC Xaa3-Gly-Thr-Xaa4-Xaa5-Xaa6-Xaa7-Xaa8-Ser-Lys-Gln-Xaa9-Glu-Glu-- Glu-Ala-
CC Val-Arg-Leu-Xaa10- Xaa11- Xaa12- Xaa13-Leu-Lys-Asn-Gly-Gly Xaa14-Ser-Ser-
CC Gly-Ala- Xaa15-Xaa16- Xaa17- Xaa18-Z; wherein: Xaa1 is His, Arg or Tyr;
CC Xaa2 is Ser, Gly, Ala, or Thr; Xaa3 is Asp or Glu; Xaa4 is Phe, Tyr, or
CC napthylalanine; Xaa5 is Thr or Ser; Xaa6 is Ser or Thr; Xaa7 is Asp or
CC Glu; Xaa8 is Leu, Ile, Val, pentylglycine, or Met; Xaa9 is Leu, Ile,
CC pentylglycine, Val, or Met; Xaa10 is Phe, Tyr, or napthylalanine; Xaa11
CC is Ile, Val, Leu, pentylglycine, tert-butylglycine, or Met; Xaa12 is Glu
CC or Asp; Xaa13 is Trp, Phe, Tyr, or napthylalanine; Xaa14, Xaa15, Xaa16,
CC and Xaa17 are independently Pro, homoproline, 3Hyp, 4Hyp, thioproline,
CC N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine; Xaa18 is Ser,
CC Thr, or Tyr; and Z is -OH or -NH2 with the proviso that the sequence is
CC not the amino acid sequences shown in the present sequence and AAY03718.
CC The specification claims for a second peptide of the above formula where
CC Xaa1 is His, Arg, Tyr or 4-imidazopropionyl. The exendin agonists are
CC used to treat Type I and II diabetes, disorders which would be benefited
CC by agents which lower plasma glucose levels, and disorders which would be
CC benefited by agents useful in delaying and/or slowing gastric emptying.
CC Delayed gastric emptying is a useful diagnostic aid in gastro-intestinal
CC radiological examinations. The present sequence represents the amino
CC acid sequence of exendin-3.
XX
SQ Sequence 39 AA;

Query Match 100.0%; Score 208; DB 20; Length 39;
Best Local Similarity 100.0%; Pred. No. 9.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
||||||||||||||||||||||||||||||||||||||||
Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

```
RESULT 6
AAB11281
ID   AAB11281 standard; Peptide; 39 AA.
XX
AC   AAB11281;
XX
DT   20-FEB-2001  (first entry)
XX
DE   H. horridum exendin 3 peptide SEQ ID NO 1.
XX
KW   Exendin; agonist; treatment; antidiabetic; insulin sensitivity; diabetes;
KW   plasma glucose; gastric emptying; food intake.
XX
OS   Heloderma horridum.
XX
PN   WO200041546-A2.
XX
PD   20-JUL-2000.
XX
PF   10-JAN-2000; 2000US-0116380.
XX
PR   14-JAN-1999;   99US-0116380.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Young A,  L'Italien JJ,  Kolterman O;
XX
DR   WPI; 2000-514584/46.
XX
PT   New formulations comprising an exendin or exendin agonist peptide used
PT   for increasing the sensitivity of a subject to insulin to treat
PT   diabetes -
XX
PS   Example 1; Figure 1; 281pp; English.
XX
CC   This invention describes a novel formulation (I) comprising an exendin or
CC   exendin agonist peptide, a buffer and an iso-osmolality modifier which
CC   has a pH of 3-7. The products of the invention have antidiabetic
CC   activity. The exendin or exendin agonist is used to increase the
CC   sensitivity of a subject to insulin to treat diabetes and disorders which
CC   would benefit from agents which lower plasma glucose levels and disorders
CC   which would benefit from agents that delay and/or slow gastric emptying
CC   or reducing food intake.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 21;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 7
AAB52871
ID   AAB52871 standard; Peptide; 39 AA.
XX
AC   AAB52871;
XX
DT   28-FEB-2001  (first entry)
XX
DE   Mexican beaded lizard extendin-3 protein.
XX
KW   Extendin; agonist; diabetes; obesity; eating disorder;
KW   dyslipidaemia; insulin-resistance syndrome; food intake.
XX
OS   Heloderma horridum.
XX
PN   WO200066629-A1.
XX
PD   09-NOV-2000.
XX
PF   28-APR-2000; 2000WO-US11814.
XX
PR   30-APR-1999;   99US-0132018.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Young A,  Prickett K;
XX
DR   WPI; 2000-672834/65.
XX
PT   Modified exendin or an exendin agonist linked to one or more
PT   polyethylene glycol (PEG) polymers, modulate plasma glucose levels,
PT   useful for treating disorders such as diabetes and obesity -
XX
PS   Example 1; Fig 1; 119pp; English.
XX
CC   The present invention relates to extendins and their agonists which have
CC   been modified with molecular weight increasing agents such as
CC   polyethylene glycol (PEG). These can be used in the treatment of
CC   diabetes, obesity, impaired glucose tolerance, postprandial dumping
CC   syndrome, postprandial hyperglycaemia, eating disorders, insulin
CC   resistance syndrome, dyslipidaemia and to suppress glucagon secretion.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 21;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 8
AAY94010
ID   AAY94010 standard; peptide; 39 AA.
XX
AC   AAY94010;
XX
DT   20-OCT-2000  (first entry)
XX
DE   Amino acid sequence of extendin-3.
XX
KW   Extendin-3; Gila monster lizard; Mexican Beaded lizard; exendin;
KW   glucagon-like peptide; plasma glucagon; necrolytic erythema;
KW   glucagonoma; hyperglucagonemia; diabetes.
XX
OS   Heloderma horridum.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   39
FT                   /note= "amidated residue"
XX
PN   WO200041548-A2.
XX
PD   20-JUL-2000.
XX
PF   14-JAN-2000; 2000WO-US00942.
XX
PR   14-JAN-1999;   99US-0116380.
PR   30-APR-1999;   99US-0132017.
PR   10-JAN-2000; 2000US-0175365.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Young A,  Gedulin B;
XX
DR   WPI; 2000-490999/43.
```

```
XX
PT   Lowering plasma glucagon using exendin, an exendin agonist, a modified
PT   exendin or a modified exendin agonist, useful for treating
PT   hyperglucagonemia and diabetes -
XX
PS   Example 1; Fig 1; 96pp; English.
XX
CC   The present sequence represents an extendin-3 peptide. Extendins are
CC   found in the salivary glands of the Gila monster and Mexican Beaded
CC   lizard, and have sequence similarity to glucagon-like peptides. It is
CC   used in the method of the invention. The specification describes a
CC   method for lowering plasma glucagon, comprising administering an
CC   exendin, an exendin agonist, a modified exendin or a modified exendin
CC   agonist. These compounds lower plasma glucagon level. The method is
CC   useful for lowering plasma glucagon in subjects, preferably humans,
CC   suffering from necrolytic erythema or glucagonoma. The method is also
CC   useful for treating hyperglucagonemia and other conditions that would
CC   benefit from reduced glucagon levels and/or suppression of glucagon,
CC   e.g. type 1 and type 2 diabetes.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 21;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 9
AAU07378
ID   AAU07378 standard; peptide; 39 AA.
XX
AC   AAU07378;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Glucagon-like peptide-1 (GLP-1) homologue, exendin 3.
XX
KW   Antidiarrhoeic; antiinflammatory; antiaddictive; premedication;
KW   antro-duodenal motility; glucagon-like peptide-1; GLP-1; endoscopy;
KW   diarrhoea; post-operative dumping syndrome; irritable bowel syndrome;
KW   narcotics withdrawal; exendin 3.
XX
OS   Homo sapiens.
XX
PN   WO200168112-A2.
XX
PD   20-SEP-2001.
XX
PF   14-MAR-2001; 2001WO-EP02882.
XX
PR   14-MAR-2000; 2000US-189091P.
XX
PA   (GOEK/) GOEKE B.
PA   (SCHI/) SCHIRRA J.
XX
PI   Goeke B,  Schirra J;
XX
DR   WPI; 2001-596887/67.
XX
PT   Inhibiting antro-duodenal motility, useful to prevent or treat
PT   gastrointestinal disorders such as irritable bowel syndrome and
PT   non-infectious diarrhoea, comprises administering glucagon-like peptide
PT   -
XX
PS   Disclosure; Page 13; 43pp; English.
XX
CC   The invention relates to a method of inhibiting antro-duodenal motility
CC   in a patient, comprising administering a glucagon-like peptide (GLP-1)
CC   molecule. The method is used to premedicate or in endoscopic
CC   procedures or to treat or prevent non-infectious acute and chronic
CC   diarrhoea, post-operative dumping syndrome, irritable bowel syndrome or
CC   symptoms associated with narcotics withdrawal. Unlike prior art treatment
CC   with glucagon, the invention is not contraindicated in persons with
CC   diabetes, does not incur the risks of side effects such as nausea, and is
CC   not expensive. The present sequence represents mammalian glucagon-like
CC   peptide-1, (GLP-1) homologue, exendin 3 as described in the method of the
CC   invention.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 22;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 10
AAE08345
ID   AAE08345 standard; peptide; 39 AA.
XX
AC   AAE08345;
XX
DT   01-NOV-2001  (first entry)
XX
DE   Heloderma horridum exendin-3 peptide.
XX
KW   Exendin-3; antilipemic; cardiant; triglyceride; inotropic; diuretic;
KW   coronary heart disease; dyslipidaemia.
XX
OS   Heloderma horridum.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   39
FT                   /note= "C-terminal amide"
XX
PN   WO200151078-A1.
XX
PD   19-JUL-2001.
XX
PF   09-JAN-2001; 2001WO-US00719.
XX
PR   10-JAN-2000; 2000US-0175365.
XX
PA   (AMYL-) AMYLIN PHARM INC.
XX
PI   Kolterman OG,  Young AA;
XX
DR   WPI; 2001-514422/56.
XX
PT   Use of exendin and exendin agonist compounds for modulating
PT   triglyceride levels, and treating heart disease and dyslipidemia -
XX
PS   Disclosure; Page 10; 161pp; English.
XX
CC   The patent discloses a method for modulating plasma or postprandial
CC   triglyceride and other lipid levels by administering exendin or an
CC   exendin agonist. Exendins have inotropic and diuretic effects. They
CC   suppress the secretion of glucagon. Exendin and its agonists have
CC   a significant effect on the reduction of blood serum triglyceride
CC   concentrations. They are used to treat coronary heart disease and
CC   dyslipidaemia, and for modifying postprandial triglyceride levels.
CC   The present sequence is exendin-3 peptide from Heloderma horridum.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 22;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
```

```
Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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```
RESULT 11
AAB91190
ID   AAB91190 standard; Peptide; 39 AA.
XX
AC   AAB91190;
XX
DT   22-JUN-2001  (first entry)
XX
DE   Pancreatic hormone glucagon peptide SEQ ID NO:364.
XX
KW   Protection; endogenous therapeutic peptide; peptidase; conjugation;
KW   blood component; modification; succinimidyl; maleimido group; amino;
KW   hydroxyl; thiol; hormone; growth factor; neurotransmitter.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200069900-A2.
XX
PD   23-NOV-2000.
XX
PF   17-MAY-2000; 2000WO-US13576.
XX
PR   17-MAY-1999;   99US-0134406.
PR   10-SEP-1999;   99US-0153406.
PR   15-OCT-1999;   99US-0159783.
XX
PA   (CONJ-) CONJUCHEM INC.
XX
PI   Bridon DP,  Ezrin AM,  Milner PG,  Holmes DL,  Thibaudeau K;
XX
DR   WPI; 2001-112059/12.
XX
PT   Modifying and attaching therapeutic peptides to albumin prevents
PT   peptidase degradation, useful for increasing length of in vivo activity
PT   -
XX
PS   Disclosure; Page 315; 733pp; English.
XX
CC   The present invention describes a modified therapeutic peptide (I)
CC   comprising a therapeutically active amino acid region (III) and a
CC   reactive group (II) (e.g. succinimidyl and maleimido groups) attached to
CC   a less therapeutically active amino acid region (IV), which covalently
CC   bonds with amino/hydroxyl/thiol groups on blood components to form a
CC   peptidase stabilised therapeutic peptide composed of 3-50 amino acids.
CC   (I) are useful for modifying therapeutic peptides e.g. hormones, growth
CC   factors and neurotransmitters, to protect them from peptidase activity
CC   in vivo for the treatment of various disorders. Endogenous therapeutic
CC   peptides are not suitable as drug candidates as they require frequent
CC   administration due to rapid degradation by peptidases in the body.
CC   Modifying and attaching therapeutic peptides to albumin prevents or
CC   reduces the action of peptidases to increase length of activity (half
CC   life) and specificity as bonding to large molecules decreases
CC   intracellular uptake and interference with physiological processes.
CC   AAB90829 to AAB92441 represent peptides which can be used in the
CC   exemplification of the present invention.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 22;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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```
RESULT 12
AAB60252
ID   AAB60252 standard; peptide; 39 AA.
XX
AC   AAB60252;
XX
DT   28-MAR-2001  (first entry)
XX
DE   Gila monster venom GLP-1 analogue, exendin 3.
XX
KW   Exendin 3; Gila monster venom; GLP-1 analogue; glucagon-like peptide-1;
KW   type II diabetes; non-insulin dependent diabetes mellitus; NIDDM;
KW   beta-cell function; secretory capacity; impaired glucose tolerance; IGT;
KW   beta-cell stimulatory test; diagnostic test; insulinotropic.
XX
OS   Heloderma suspectum.
XX
PN   WO200077039-A2.
XX
PD   21-DEC-2000.
XX
PF   14-JUN-2000; 2000WO-US16428.
XX
PR   15-JUN-1999;   99US-0333415.
XX
PA   (BION-) BIONEBRASKA INC.
XX
PI   Holst JJ,  Vilsboll T;
XX
DR   WPI; 2001-102518/11.
XX
PT   Evaluating beta-cell secretory capacity and responsiveness to glucose,
PT   useful for diagnosing impaired glucose tolerance and diabetes,
PT   comprises employing glucagon-like-peptide-1 as a diagnostic test to
PT   determine beta-cell function -
XX
PS   Disclosure; Page 13; 42pp; English.
XX
CC   The invention relates to a new method for evaluating beta-cell secretory
CC   capacity in an individual, or responsiveness of a beta-cell to glucose,
CC   comprising the administration of glucose and glucagon-like peptide-1
CC   (GLP-1) or its biologically active analogues. The response in the
CC   individual is then measured against the standard response of a healthy
CC   individual to determine if the individual has impaired beta-cell
CC   function. The method is useful for detecting impaired beta-cell function
CC   in an individual, and is particularly useful for diagnosing impaired
CC   glucose tolerance (IGT) and non-insulin-dependent (type II) diabetes.
CC   The method is a rapid test of beta-cell function, which is a marker for
CC   impaired glucose tolerance. Unlike prior methods, the method is reliable
CC   and without significant adverse side effects and/or patient pain and
CC   discomfort. The method also provides information about insulin secretory
CC   capacity, and is easy and reproducible. The present sequence represents
CC   a Gila monster venom GLP-1 analogue peptide referred to in the disclosure
CC   of the invention.
XX
SQ   Sequence   39 AA;

  Query Match             100.0%;  Score 208;  DB 22;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 9.2e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
```

```
RESULT 13
AAB64181
ID   AAB64181 standard; peptide; 39 AA.
XX
AC   AAB64181;
XX
DT   27-MAR-2001  (first entry)
```

XX
DE Mexican beaded lizard exendin-3, SEQ ID NO:1.
XX
KW Exendin-3; gestational diabetes mellitus; GDM; insulin resistance;
KW pregnancy complication; neonatal abnormality; blood glucose modulator;
KW insulinotropic; anorectic; Mexican beaded lizard.
XX
OS Heloderma horridum.
XX
PN WO200073331-A2.
XX
PD 07-DEC-2000.
XX
PF 23-MAY-2000; 2000WO-US14231.
XX
PR 01-JUN-1999; 99US-0323867.
XX
PA (AMYL-) AMYLIN PHARM INC.
XX
PI Hiles R, Prickett KS;
XX
DR WPI; 2001-137634/14.
XX
PT Use of exendins or exendin agonists for lowering or reducing blood
PT glucose levels and treating gestational diabetes mellitus in a subject,
PT especially in a human -
XX
PS Claim 11; Page 10-11; 133pp; English.
XX
CC The invention relates to the use of an exendin (AAB64181-B64182) or
CC an exendin agonist (AAB64185-B64368) for treating gestational diabetes
CC mellitus (GDM) in a patient. GDM arises during pregnancy, and is due
CC to a combination of increased insulin resistance and a diminished
CC ability to increase insulin secretion. In contrast, in a normal
CC pregnancy, both insulin resistance and insulin secretion increase. GDM
CC pregnancies are associated with complications in both the mother and the
CC foetus. Women with GDM have increased rates of Caesarian delivery,
CC hypertensive disorders such as pre-eclampsia, and urinary tract
CC infections. GDM results in an elevated rate of foetal abnormalities such
CC as neural tube defects, and is associated with an increased risk of
CC neonatal morbidites such as hypoglycaemia, hypocalcaemia,
CC hypomagnesaemia, polycythaemia, hyperbilirubinaemia, and subsequent
CC childhood and adolescent obesity. Exendins are peptides from the salivary
CC secretions of the Gila monster (exendin-4) and the Mexican beaded lizard
CC (exendin-3) which exhibit homology with several members of the
CC glucagon-like peptide family, particularly GLP-1, and have similar
CC insulinotropic effects. Unlike the compounds used to treat type 2
CC diabetes, which are contraindicated for GDM, exendins and exendin
CC agonists do not cross the placenta and thus do not cause severe prolonged
CC hypoglycaemia in the newborn. They have a potent and prolonged effect on
CC blood glucose, and, unlike conventional insulin therapy, should not cause
CC weight gain, as they inhibit gastric emptying and reduce appetite. The
CC present sequence represents exendin-3 from the Mexican beaded lizard
CC which is specifically claimed for use in the invention.
XX
SQ Sequence 39 AA;

Query Match 100.0%; Score 208; DB 22; Length 39;
Best Local Similarity 100.0%; Pred. No. 9.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
||||||||||||||||||||||||||||||||||||||||
Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

RESULT 14
AAB48800
ID AAB48800 standard; peptide; 39 AA.
XX
AC AAB48800;
XX
DT 09-MAR-2001 (first entry)

XX
DE Exendin-3, SEQ ID NO:11.
XX
KW Insulinotropic peptide; insulin production; GLP-1 derivative;
KW glucagon-like peptide 1; exendin derivative; reactive group;
KW peptidase stabilisation; blood protein; conjugation; type II diabetes;
KW insulin resistance; nervous system disorder; sedative; anxiolytic;
KW antidiabetic; neuroprotective; tranquiliser; anticonvulsant.
XX
OS Unidentified.
XX
PN WO200069911-A1.
XX
PD 23-NOV-2000.
XX
PF 17-MAY-2000; 2000WO-US13563.
XX
PR 17-MAY-1999; 99US-0134406.
PR 15-OCT-1999; 99US-0159783.
XX
PA (CONJ-) CONJUCHEM INC.
XX
PI Bridon DP, L'Archeveque B, Ezrin AM, Holmes DL, Leblanc A;
PI St Pierre S;
XX
DR WPI; 2001-025008/03.
XX
PT Novel modified insulinotropic peptides for treating diabetes, nervous
PT system disorders and for post surgery treatment, has reactive groups
PT which react with amino, hydroxy or thiol groups on blood components -
XX
PS Claim 4; Page 88-89; 96pp; English.
XX
CC The invention relates to modified insulinotropic peptides (ITPs), or
CC derivatives thereof which comprise a reactive group which reacts with
CC amino groups, hydroxyl groups or thiol groups on blood components (e.g.,
CC serum albumin) to form a stable covalent bond. The insulinotropic
CC peptides of the invention are derivatives of glucagon-like peptide 1
CC (GLP-1) or exendin and contain a reactive group such as a maleimido
CC group or a succinimidyl group. The peptides of the invention act by
CC stimulating the synthesis or expression of insulin. A composition
CC comprising a peptide of the invention is useful for treating diabetes,
CC paticularly type II (maturity onset) diabetes. It is also useful as a
CC sedative; for the treatment of nervous system disorders including
CC anxiety, psychosis, seizures, panic attacks, hysteria and sleep
CC disorders; to induce an anxiolytic effect on the central nervous system
CC (CNS); to activate the CNS for the treatment of disorders such as
CC depression, memory loss and narcolepsy; and as a treatment for
CC insulin resistance, particularly that which occurs after certain types
CC of surgery. The conjugation of a peptide of the invention to a
CC blood component via the reactive group provides increased stability in
CC the presence of peptidases. The peptides of the invention therefore
CC have a longer in vivo. half-life as they are less susceptible to
CC proteolytic degradation. The present sequence represents an
CC insulinotropic peptide of the invention.
XX
SQ Sequence 39 AA;

Query Match 100.0%; Score 208; DB 22; Length 39;
Best Local Similarity 100.0%; Pred. No. 9.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
||||||||||||||||||||||||||||||||||||||||
Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

RESULT 15
AAB36419
ID AAB36419 standard; peptide; 39 AA.
XX
AC AAB36419;
XX

DT 28-FEB-2001 (first entry)
XX
DE Gila monster venom exendin 3 peptide SEQ ID NO:7.
XX
KW Glucagon-like peptide-1; GLP-1; GLP-2; vasotropic; cerebroprotective;
KW brain tissue injury; reperfusion; blood flow; ischaemia; acute stroke;
KW metabolic intervention; haemorrhage; tissue damage; medical procedure;
KW surgical; insulin; hyperglycaemia; hypoglycaemia; brain anabolism;
KW euglycaemia.
XX
OS Heloderma suspectum.
XX
FH Key Location/Qualifiers
FT Modified-site 39
FT /note= "amidated"
XX
PN WO200066142-A2.
XX
PD 09-NOV-2000.
XX
PF 01-MAY-2000; 2000WO-US11652.
XX
PR 30-APR-1999; 99US-0303016.
XX
PA (BION-) BIONEBRASKA INC.
XX
PI Coolidge TR, Ehlers MRW;
XX
DR WPI; 2001-015911/02.
XX
PT A method for amelioration of brain tissue injury comprises
PT administering a composition including a compound which binds to a
PT receptor for glucagon-like peptide-1 -
XX
PS Disclosure; Page 8; 19pp; English.
XX
CC The present invention describes a method for the amelioration of brain
CC tissue injury caused by reperfusion of blood flow comprising
CC administering a composition including a compound which binds to a
CC receptor for glucagon-like peptide-1 (GLP-1), in a pharmaceutical
CC carrier. The method is used for amelioration of brain tissue injury
CC caused by reperfusion of blood flow following a period of ischaemia.
CC GLP-1 is used for metabolic intervention to improve the function of
CC ischaemic and reperfused brain cells. It treats patients after an acute
CC stroke or haemorrhage and tissue damage arising from a medical procedure
CC that is a surgical event causing ischaemia of brain tissue or a medical
CC procedure involving a reperfusion event. GLP-1 is an ideal alternative
CC to insulin for the treatment of stroke as it stimulates endogenous
CC insulin secretion in the presence of normo- to hyperglycaemia but not
CC during hypoglycaemia, thus protecting against the development of severe
CC hypoglycaemia. The treatment optimises insulin secretion, increases
CC brain anabolism, enhancing insulin effectiveness by suppressing glucagon
CC and maintains euglycaemia or mild hypoglycaemia with no risk of severe
CC hypoglycaemia. The present sequence represents a Gila monster venom
CC peptide which is homologous to GLP-1, and is given in the
CC exemplification of the present invention.
XX
SQ Sequence 39 AA;

Query Match 100.0%; Score 208; DB 22; Length 39;
Best Local Similarity 100.0%; Pred. No. 9.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

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Job time : 75 secs

GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 28, 2003, 08:36:08 ; Search time 28 Seconds
(without alignments)
40.982 Million cell updates/sec

Title: US-09-756-690A-1
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Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 262574 seqs, 29422922 residues

Total number of hits satisfying chosen parameters: 262574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	208	100.0	39	1	US-08-066-480-1	Sequence 1, Appli
2	208	100.0	39	4	US-09-302-596-7	Sequence 7, Appli
3	208	100.0	39	4	US-09-623-618B-11	Sequence 11, Appl
4	208	100.0	39	4	US-09-333-415-7	Sequence 7, Appli
5	208	100.0	39	4	US-09-303-016-7	Sequence 7, Appli
6	208	100.0	40	4	US-09-623-618B-19	Sequence 19, Appl
7	208	100.0	40	4	US-09-623-618B-33	Sequence 33, Appl
8	208	100.0	40	4	US-09-623-618B-34	Sequence 34, Appl
9	200	96.2	39	1	US-08-066-480-2	Sequence 2, Appli
10	200	96.2	39	4	US-09-302-596-9	Sequence 9, Appli
11	200	96.2	39	4	US-09-623-618B-12	Sequence 12, Appl
12	200	96.2	39	4	US-09-333-415-9	Sequence 9, Appli
13	200	96.2	39	4	US-09-303-016-9	Sequence 9, Appli
14	200	96.2	40	4	US-09-623-618B-18	Sequence 18, Appl
15	200	96.2	40	4	US-09-623-618B-31	Sequence 31, Appl
16	200	96.2	40	4	US-09-623-618B-32	Sequence 32, Appl
17	164	78.8	31	1	US-08-066-480-5	Sequence 5, Appli
18	164	78.8	31	4	US-09-302-596-8	Sequence 8, Appli
19	164	78.8	31	4	US-09-333-415-8	Sequence 8, Appli
20	164	78.8	31	4	US-09-303-016-8	Sequence 8, Appli
21	160	76.9	31	4	US-09-623-618B-24	Sequence 24, Appl
22	158	76.0	31	4	US-09-623-618B-15	Sequence 15, Appl
23	157	75.5	31	1	US-08-066-480-3	Sequence 3, Appli
24	157	75.5	32	4	US-09-623-618B-35	Sequence 35, Appl
25	150	72.1	31	1	US-08-066-480-4	Sequence 4, Appli
26	150	72.1	31	4	US-09-623-618B-14	Sequence 14, Appl
27	150	72.1	31	4	US-09-623-618B-23	Sequence 23, Appl
28	141.5	68.0	31	4	US-09-623-618B-13	Sequence 13, Appl
29	139.5	67.1	31	4	US-09-623-618B-20	Sequence 20, Appl
30	133	63.9	29	4	US-09-623-618B-22	Sequence 22, Appl
31	132.5	63.7	30	4	US-09-623-618B-21	Sequence 21, Appl
32	94.5	45.4	176	2	US-08-835-231-18	Sequence 18, Appl
33	94.5	45.4	176	4	US-09-108-661-18	Sequence 18, Appl
34	90	43.3	31	4	US-09-209-799D-14	Sequence 14, Appl
35	89	42.8	36	2	US-08-836-528-1	Sequence 1, Appli
36	88	42.3	31	1	US-08-062-472B-42	Sequence 42, Appl
37	88	42.3	31	4	US-09-258-750-1	Sequence 1, Appli
38	88	42.3	31	4	US-09-258-750-4	Sequence 4, Appli
39	88	42.3	31	4	US-09-258-750-8	Sequence 8, Appli
40	88	42.3	31	4	US-09-585-181A-1	Sequence 1, Appli
41	88	42.3	31	4	US-09-209-799D-13	Sequence 13, Appl
42	88	42.3	31	4	US-09-398-111-1	Sequence 1, Appli
43	88	42.3	31	4	US-09-398-111-4	Sequence 4, Appli
44	88	42.3	31	4	US-09-398-111-8	Sequence 8, Appli
45	88	42.3	32	4	US-09-261-853-3	Sequence 3, Appli

ALIGNMENTS

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RESULT 1
US-08-066-480-1
; Sequence 1, Application US/08066480
; Patent No. 5424286
;  GENERAL INFORMATION:
;    APPLICANT:  Eng, John
;    TITLE OF INVENTION:  Pharmaceutical Compositions And Use of
;    TITLE OF INVENTION:  Exendin-3 and Exendin-4 for Treatment of Diabetes Mellitu
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Allegretti & Witcoff, Ltd.
;      STREET:  10 S. Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/066,480
;      FILING DATE:  24-MAR-1993
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McDonnell, John J
;      REGISTRATION NUMBER:  26,949
;      REFERENCE/DOCKET NUMBER:  93,084
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-715-1000
;      TELEFAX:  312-715-1234
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  39 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..39
;      OTHER INFORMATION:  /label= Exendin-3
US-08-066-480-1

  Query Match           100.0%;  Score 208;  DB 1;  Length 39;
  Best Local Similarity  100.0%;  Pred. No. 7.1e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 2
US-09-302-596-7
; Sequence 7, Application US/09302596
; Patent No. 6284725
; GENERAL INFORMATION:
;  APPLICANT: Coolidge, Thomas R.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
;  TITLE OF INVENTION:  Ischemic and Reperfused Tissue
;  FILE REFERENCE: P03660US1
;  CURRENT APPLICATION NUMBER: US/09/302,596
;  CURRENT FILING DATE:  1999-04-30
;  PRIOR APPLICATION NUMBER: 60/103,498
;  PRIOR FILING DATE: 1998-10-08
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Gila Monster venom
US-09-302-596-7

  Query Match             100.0%;  Score 208;  DB 4;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 3
US-09-623-618B-11
; Sequence 11, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-623-618B-11

  Query Match             100.0%;  Score 208;  DB 4;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 4
US-09-333-415-7
; Sequence 7, Application US/09333415
; Patent No. 6344180
; GENERAL INFORMATION:
;  APPLICANT:  Holst, Jens J.
;  APPLICANT:  Vilsboll, Tina
;  TITLE OF INVENTION:  GLP-1 as a Diagnostic Test to Determine Beta-Cell
;  TITLE OF INVENTION:  Function and the Presence of the Condition of IGT and
;  TITLE OF INVENTION:  Type-II Diabetes
;  FILE REFERENCE:  P03987US0
;  CURRENT APPLICATION NUMBER: US/09/333,415
;  CURRENT FILING DATE:  1999-06-15
;  NUMBER OF SEQ ID NOS:  13
;  SOFTWARE:  PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
US-09-333-415-7

  Query Match             100.0%;  Score 208;  DB 4;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 5
US-09-303-016-7
; Sequence 7, Application US/09303016
; Patent No. 6429197
; GENERAL INFORMATION:
;  APPLICANT:  Coolidge, Thomas R.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION:  Metabolic Intervention with GLP-1 or its Biologically
;  TITLE OF INVENTION:  Active Analogues to Improve the Function of the
;  TITLE OF INVENTION:  Ischemic and Reperfused Brain
;  FILE REFERENCE:  P03660US2
;  CURRENT APPLICATION NUMBER: US/09/303,016
;  CURRENT FILING DATE:  1999-04-30
;  PRIOR APPLICATION NUMBER:  60/103,498
;  PRIOR FILING DATE:  1998-10-08
;  NUMBER OF SEQ ID NOS:  13
;  SOFTWARE:  PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
US-09-303-016-7

  Query Match             100.0%;  Score 208;  DB 4;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 7.1e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 6
US-09-623-618B-19
; Sequence 19, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
```

```
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 19
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-623-618B-19

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  Best Local Similarity   100.0%;  Pred. No. 7.4e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 7
US-09-623-618B-33
; Sequence 33, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 33
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
;   NAME/KEY: MOD_RES
;   LOCATION: 40
;   OTHER INFORMATION: Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents Epsil
US-09-623-618B-33

  Query Match             100.0%;  Score 208;  DB 4;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 8
US-09-623-618B-34
; Sequence 34, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 34
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
;   NAME/KEY: MOD_RES
;   LOCATION: 33
;   OTHER INFORMATION: Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-5TFA and where "E" r
US-09-623-618B-34

  Query Match             100.0%;  Score 208;  DB 4;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 7.4e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 9
US-08-066-480-2
; Sequence 2, Application US/08066480
; Patent No. 5424286
;  GENERAL INFORMATION:
;    APPLICANT:  Eng, John
;    TITLE OF INVENTION:  Pharmaceutical Compositions And Use of
;    TITLE OF INVENTION:  Exendin-3 and Exendin-4 for Treatment of Diabetes Mellitu
;    NUMBER OF SEQUENCES:  7
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Allegretti & Witcoff, Ltd.
;      STREET:  10 S. Wacker Drive
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60606
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/066,480
;      FILING DATE:  24-MAR-1993
;      CLASSIFICATION:  514
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;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McDonnell, John J
;      REGISTRATION NUMBER:  26,949
;      REFERENCE/DOCKET NUMBER:  93,084
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  312-715-1000
;      TELEFAX:  312-715-1234
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  39 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  peptide
;    FEATURE:
;      NAME/KEY:  Peptide
;      LOCATION:  1..39
;      OTHER INFORMATION:  /label= Exendin-4
US-08-066-480-2

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  Best Local Similarity   94.9%;  Pred. No. 7.4e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 10
US-09-302-596-9
; Sequence 9, Application US/09302596
; Patent No. 6284725
; GENERAL INFORMATION:
;  APPLICANT: Coolidge, Thomas R.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
;  TITLE OF INVENTION:  Ischemic and Reperfused Tissue
;  FILE REFERENCE: P03660US1
;  CURRENT APPLICATION NUMBER: US/09/302,596
;  CURRENT FILING DATE:  1999-04-30
;  PRIOR APPLICATION NUMBER: 60/103,498
;  PRIOR FILING DATE: 1998-10-08
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 9
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Gila Monster venom
US-09-302-596-9

  Query Match             96.2%;  Score 200;  DB 4;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 7.4e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 11
US-09-623-618B-12
; Sequence 12, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-623-618B-12

  Query Match             96.2%;  Score 200;  DB 4;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 7.4e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 12
US-09-333-415-9
; Sequence 9, Application US/09333415
; Patent No. 6344180
; GENERAL INFORMATION:
;  APPLICANT:  Holst, Jens J.
;  APPLICANT:  Vilsboll, Tina
;  TITLE OF INVENTION:  GLP-1 as a Diagnostic Test to Determine Beta-Cell
;  TITLE OF INVENTION:  Function and the Presence of the Condition of IGT and
;  TITLE OF INVENTION:  Type-II Diabetes
;  FILE REFERENCE:  P03987US0
;  CURRENT APPLICATION NUMBER: US/09/333,415
;  CURRENT FILING DATE:  1999-06-15
;  NUMBER OF SEQ ID NOS:  13
;  SOFTWARE:  PatentIn Ver. 2.0
; SEQ ID NO 9
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
US-09-333-415-9

  Query Match             96.2%;  Score 200;  DB 4;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 7.4e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 13
US-09-303-016-9
; Sequence 9, Application US/09303016
; Patent No. 6429197
; GENERAL INFORMATION:
;  APPLICANT:  Coolidge, Thomas R.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION:  Metabolic Intervention with GLP-1 or its Biologically
;  TITLE OF INVENTION:  Active Analogues to Improve the Function of the
;  TITLE OF INVENTION:  Ischemic and Reperfused Brain
;  FILE REFERENCE:  P03660US2
;  CURRENT APPLICATION NUMBER: US/09/303,016
;  CURRENT FILING DATE:  1999-04-30
;  PRIOR APPLICATION NUMBER:  60/103,498
;  PRIOR FILING DATE:  1998-10-08
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;  NUMBER OF SEQ ID NOS:  13
;  SOFTWARE:  PatentIn Ver. 2.0
; SEQ ID NO 9
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
US-09-303-016-9

  Query Match             96.2%;  Score 200;  DB 4;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 7.4e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 14
US-09-623-618B-18
; Sequence 18, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 18
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-623-618B-18

  Query Match             96.2%;  Score 200;  DB 4;  Length 40;
  Best Local Similarity   94.9%;  Pred. No. 7.6e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          | :|||||||||||||||||||||||||||||||||||||
Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 15
US-09-623-618B-31
; Sequence 31, Application US/09623618B
; Patent No. 6329336
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001620
;  CURRENT APPLICATION NUMBER: US/09/623,618B
;  CURRENT FILING DATE:  2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 31
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
;   NAME/KEY: MOD_RES
;   LOCATION: 40
;   OTHER INFORMATION: Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents
US-09-623-618B-31

  Query Match             96.2%;  Score 200;  DB 4;  Length 40;
  Best Local Similarity   94.9%;  Pred. No. 7.6e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


Search completed: March 28, 2003, 08:40:49
Job time : 29 secs
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GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

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(without alignments)
163.587 Million cell updates/sec

Title: US-09-756-690A-1
Perfect score: 208
Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

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Gapop 10.0 , Gapext 0.5

Searched: 237916 seqs, 58723674 residues

Total number of hits satisfying chosen parameters: 237916

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
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3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
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9: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
10: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
11: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	208	100.0	39	9	US-09-756-690A-1	Sequence 1, Appli
2	208	100.0	39	10	US-09-876-388-11	Sequence 11, Appl
3	208	100.0	39	10	US-09-851-738-7	Sequence 7, Appli
4	208	100.0	39	10	US-09-805-507-7	Sequence 7, Appli
5	208	100.0	39	10	US-09-859-804-7	Sequence 7, Appli
6	208	100.0	39	10	US-09-003-869-1	Sequence 1, Appli
7	208	100.0	39	10	US-09-982-978-7	Sequence 7, Appli
8	208	100.0	39	10	US-09-953-021B-7	Sequence 7, Appli
9	208	100.0	40	10	US-09-876-388-19	Sequence 19, Appl
10	208	100.0	40	10	US-09-876-388-33	Sequence 33, Appl
11	208	100.0	40	10	US-09-876-388-34	Sequence 34, Appl
12	204	98.1	39	9	US-09-756-690A-14	Sequence 14, Appl
13	204	98.1	39	10	US-09-003-869-14	Sequence 14, Appl
14	200	96.2	39	9	US-09-756-690A-2	Sequence 2, Appli
15	200	96.2	39	10	US-09-876-388-12	Sequence 12, Appl
16	200	96.2	39	10	US-09-851-738-9	Sequence 9, Appli
17	200	96.2	39	10	US-09-805-507-9	Sequence 9, Appli
18	200	96.2	39	10	US-09-859-804-9	Sequence 9, Appli
19	200	96.2	39	10	US-09-003-869-2	Sequence 2, Appli
20	200	96.2	39	10	US-09-982-978-9	Sequence 9, Appli
21	200	96.2	39	10	US-09-953-021B-9	Sequence 9, Appli
22	200	96.2	40	10	US-09-876-388-18	Sequence 18, Appl
23	200	96.2	40	10	US-09-876-388-31	Sequence 31, Appl
24	200	96.2	40	10	US-09-876-388-32	Sequence 32, Appl
25	199	95.7	39	9	US-09-756-690A-25	Sequence 25, Appl
26	199	95.7	39	10	US-09-003-869-25	Sequence 25, Appl
27	197	94.7	39	9	US-09-756-690A-10	Sequence 10, Appl
28	197	94.7	39	9	US-09-756-690A-18	Sequence 18, Appl
29	197	94.7	39	9	US-09-756-690A-29	Sequence 29, Appl
30	197	94.7	39	10	US-09-003-869-10	Sequence 10, Appl
31	197	94.7	39	10	US-09-003-869-18	Sequence 18, Appl
32	197	94.7	39	10	US-09-003-869-29	Sequence 29, Appl
33	196	94.2	38	9	US-09-756-690A-62	Sequence 62, Appl
34	196	94.2	38	10	US-09-003-869-62	Sequence 62, Appl
35	196	94.2	39	9	US-09-756-690A-13	Sequence 13, Appl
36	196	94.2	39	9	US-09-756-690A-16	Sequence 16, Appl
37	196	94.2	39	9	US-09-756-690A-19	Sequence 19, Appl
38	196	94.2	39	10	US-09-003-869-13	Sequence 13, Appl
39	196	94.2	39	10	US-09-003-869-16	Sequence 16, Appl
40	196	94.2	39	10	US-09-003-869-19	Sequence 19, Appl
41	195	93.8	39	9	US-09-756-690A-20	Sequence 20, Appl
42	195	93.8	39	9	US-09-756-690A-27	Sequence 27, Appl
43	195	93.8	39	10	US-09-003-869-20	Sequence 20, Appl
44	195	93.8	39	10	US-09-003-869-27	Sequence 27, Appl
45	194	93.3	39	9	US-09-756-690A-12	Sequence 12, Appl

ALIGNMENTS

RESULT 1
US-09-756-690A-1
; Sequence 1, Application US/09756690A
; Publication No. US20030036504A1
; GENERAL INFORMATION:
; APPLICANT: KOLTERMAN, ORVILLE G.
; APPLICANT: YOUNG, ANDREW A.
; TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR MODULATION OF
; TITLE OF INVENTION: TRIGLYCERIDE LEVELS AND TREATMENT OF DYSLIPIDEMIA
; FILE REFERENCE: 249/124
; CURRENT APPLICATION NUMBER: US/09/756,690A
; CURRENT FILING DATE: 2002-04-19
; PRIOR APPLICATION NUMBER: 60/175,365
; PRIOR FILING DATE: 2000-01-10
; NUMBER OF SEQ ID NOS: 188
; SOFTWARE: PatentIn Ver 2.1
; SEQ ID NO 1
; LENGTH: 39
; TYPE: PRT
; ORGANISM: Heloderma horridum
; FEATURE:
; OTHER INFORMATION: Exendin-3
; FEATURE:
; OTHER INFORMATION: c-term amidation
US-09-756-690A-1

Query Match 100.0%; Score 208; DB 9; Length 39;
Best Local Similarity 100.0%; Pred. No. 1.4e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

RESULT 2
US-09-876-388-11
; Sequence 11, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: L'Archeveque, Benoit

```
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001610
;  CURRENT APPLICATION NUMBER: US/09/876,388
;  CURRENT FILING DATE:  2001-09-24
;  PRIOR APPLICATION NUMBER: 09/623,618
;  PRIOR FILING DATE: 2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-876-388-11

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 3
US-09-851-738-7
; Sequence 7, Application US/09851738
; Patent No. US20020055460A1
; GENERAL INFORMATION:
;  APPLICANT: Coolidge, Thomas R.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of
;  TITLE OF INVENTION:  Ischemic and Reperfused Tissue
;  FILE REFERENCE: P03660US1
;  CURRENT APPLICATION NUMBER: US/09/851,738
;  CURRENT FILING DATE:  2001-05-09
;  PRIOR APPLICATION NUMBER: 09/302,596
;  PRIOR FILING DATE: 1999-04-30
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Gila Monster venom
US-09-851-738-7

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 4
US-09-805-507-7
; Sequence 7, Application US/09805507
; Patent No. US20020098195A1
; GENERAL INFORMATION:
;  APPLICANT: COOLIDGE, THOMAS R.
;  APPLICANT:  EHLERS, MARIO
;  TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
;  FILE REFERENCE: 089187/0395
;  CURRENT APPLICATION NUMBER: US/09/805,507
;  CURRENT FILING DATE:  2001-03-14
;  PRIOR APPLICATION NUMBER: 09/859,804
;  PRIOR FILING DATE: 2001-05-18
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Unknown Organism
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Exendrin 3
US-09-805-507-7

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 5
US-09-859-804-7
; Sequence 7, Application US/09859804
; Patent No. US20020107206A1
; GENERAL INFORMATION:
;  APPLICANT: COOLIDGE, THOMAS R.
;  APPLICANT:  EHLERS, MARIO
;  TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
;  FILE REFERENCE: 089187/0395
;  CURRENT APPLICATION NUMBER: US/09/859,804
;  CURRENT FILING DATE:  2001-05-18
;  PRIOR APPLICATION NUMBER: 60/205,239
;  PRIOR FILING DATE: 2000-05-19
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Unknown Organism
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Exendrin 3
US-09-859-804-7

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 6
US-09-003-869-1
; Sequence 1, Application US/09003869A
; Patent No. US20020137666A1
; GENERAL INFORMATION:
;  APPLICANT: BEELEY, NIGEL ROBERT ARNOLD
;  APPLICANT: PRICKETT, KATHRYN S.
;  APPLICANT: BHAVSAR, SUNIL
;  TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR
;  TITLE OF INVENTION: THE REDUCTION OF FOOD INTAKE
;  FILE REFERENCE: 231/181
;  CURRENT APPLICATION NUMBER: US/09/003,869A
;  CURRENT FILING DATE: 1998-01-07
;  EARLIER APPLICATION NUMBER: US 60/034,905
;  EARLIER FILING DATE: 1997-01-07
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;  EARLIER APPLICATION NUMBER: US 60/055,404
;  EARLIER FILING DATE: 1997-08-08
;  EARLIER APPLICATION NUMBER: US 60/065,442
;  EARLIER FILING DATE: 1997-11-14
;  EARLIER APPLICATION NUMBER: US 60/066,029
;  EARLIER FILING DATE: 1997-11-14
;  NUMBER OF SEQ ID NOS: 188
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 1
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma horridum
;   FEATURE:
;   NAME/KEY: AMIDATION
;   LOCATION: (39)...(39)
;   OTHER INFORMATION: amidated Ser (Serinamide)
US-09-003-869-1

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 7
US-09-982-978-7
; Sequence 7, Application US/09982978
; Patent No. US20020146405A1
; GENERAL INFORMATION:
;  APPLICANT: COOLIDGE, THOMAS R.
;  APPLICANT:  EHLERS, MARIO
;  TITLE OF INVENTION: TREATMENT OF ACUTE CORONARY SYNDROME WITH GLP-1
;  FILE REFERENCE: 089187/0395
;  CURRENT APPLICATION NUMBER: US/09/982,978
;  CURRENT FILING DATE:  2001-10-22
;  PRIOR APPLICATION NUMBER: 09/859,804
;  PRIOR FILING DATE: 2001-05-18
;  PRIOR APPLICATION NUMBER: 60/205,239
;  PRIOR FILING DATE: 2000-05-19
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Unknown Organism
;   FEATURE:
;   OTHER INFORMATION: Description of Unknown Organism: Exendrin 3
US-09-982-978-7

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 8
US-09-953-021B-7
; Sequence 7, Application US/09953021B
; Patent No. US20020147131A1
; GENERAL INFORMATION:
;  APPLICANT: Coolidge, Thomas L.
;  APPLICANT:  Ehlers, Mario R.W.
;  TITLE OF INVENTION: Metabolic Intervention with GLP-1 to Improve the Function of Isch
;  TITLE OF INVENTION:  Reperfused Skeletal Muscle Tissue
;  FILE REFERENCE: P03660US6
;  CURRENT APPLICATION NUMBER: US/09/953,021B
;  CURRENT FILING DATE:  2001-09-11
;  PRIOR APPLICATION NUMBER: 09/302,596
;  PRIOR FILING DATE: 1999-04-30
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 7
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
US-09-953-021B-7

  Query Match             100.0%;  Score 208;  DB 10;  Length 39;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 9
US-09-876-388-19
; Sequence 19, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001610
;  CURRENT APPLICATION NUMBER: US/09/876,388
;  CURRENT FILING DATE:  2001-09-24
;  PRIOR APPLICATION NUMBER: 09/623,618
;  PRIOR FILING DATE: 2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-876-388-19

  Query Match             100.0%;  Score 208;  DB 10;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          |||||||||||||||||||||||||||||||||||||||
Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 10
US-09-876-388-33
; Sequence 33, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
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;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001610
;  CURRENT APPLICATION NUMBER: US/09/876,388
;  CURRENT FILING DATE:  2001-09-24
;  PRIOR APPLICATION NUMBER: 09/623,618
;  PRIOR FILING DATE: 2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 33
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
;   NAME/KEY: MOD_RES
;   LOCATION: 40
;   OTHER INFORMATION: Xaa represents Lys(E-MPA)-NH2-5TFA and where "E" represents Epsil
US-09-876-388-33

  Query Match             100.0%;  Score 208;  DB 10;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 11
US-09-876-388-34
; Sequence 34, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001610
;  CURRENT APPLICATION NUMBER: US/09/876,388
;  CURRENT FILING DATE:  2001-09-24
;  PRIOR APPLICATION NUMBER: 09/623,618
;  PRIOR FILING DATE: 2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
;   LENGTH: 40
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
;   NAME/KEY: MOD_RES
;   LOCATION: 40
;   OTHER INFORMATION: Xaa represents Lys(E-AEEA-AEEA-MPA)-NH2-5TFA and where "E" repres
US-09-876-388-34

  Query Match             100.0%;  Score 208;  DB 10;  Length 40;
  Best Local Similarity   100.0%;  Pred. No. 1.5e-19;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 12
US-09-756-690A-14
; Sequence 14, Application US/09756690A
; Publication No. US20030036504A1
; GENERAL INFORMATION:
;  APPLICANT: KOLTERMAN, ORVILLE G.
;  APPLICANT:  YOUNG, ANDREW A.
;  TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR MODULATION OF
;  TITLE OF INVENTION:  TRIGLYCERIDE LEVELS AND TREATMENT OF DYSLIPIDEMIA
;  FILE REFERENCE: 249/124
;  CURRENT APPLICATION NUMBER: US/09/756,690A
;  CURRENT FILING DATE:  2002-04-19
;  PRIOR APPLICATION NUMBER: 60/175,365
;  PRIOR FILING DATE: 2000-01-10
;  NUMBER OF SEQ ID NOS: 188
;  SOFTWARE: PatentIn Ver 2.1
; SEQ ID NO 14
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Exendin Agonist
;   FEATURE:
;   OTHER INFORMATION: c-term amidation
US-09-756-690A-14

  Query Match             98.1%;  Score 204;  DB 9;  Length 39;
  Best Local Similarity   97.4%;  Pred. No. 4.5e-19;
  Matches   38;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 13
US-09-003-869-14
; Sequence 14, Application US/09003869A
; Patent No. US20020137666A1
; GENERAL INFORMATION:
;  APPLICANT: BEELEY, NIGEL ROBERT ARNOLD
;  APPLICANT: PRICKETT, KATHRYN S.
;  APPLICANT: BHAVSAR, SUNIL
;  TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR
;  TITLE OF INVENTION: THE REDUCTION OF FOOD INTAKE
;  FILE REFERENCE: 231/181
;  CURRENT APPLICATION NUMBER: US/09/003,869A
;  CURRENT FILING DATE: 1998-01-07
;  EARLIER APPLICATION NUMBER: US 60/034,905
;  EARLIER FILING DATE: 1997-01-07
;  EARLIER APPLICATION NUMBER: US 60/055,404
;  EARLIER FILING DATE: 1997-08-08
;  EARLIER APPLICATION NUMBER: US 60/065,442
;  EARLIER FILING DATE: 1997-11-14
;  EARLIER APPLICATION NUMBER: US 60/066,029
;  EARLIER FILING DATE: 1997-11-14
;  NUMBER OF SEQ ID NOS: 188
;  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 14
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: artificially synthesized sequence of novel exendin agonist
;   OTHER INFORMATION: compound
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;   FEATURE:
;   NAME/KEY: AMIDATION
;   LOCATION: (39)...(39)
;   OTHER INFORMATION: amidated Ser (Serinamide)
US-09-003-869-14

  Query Match             98.1%;  Score 204;  DB 10;  Length 39;
  Best Local Similarity   97.4%;  Pred. No. 4.5e-19;
  Matches   38;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
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Db      1 HGDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 14
US-09-756-690A-2
; Sequence 2, Application US/09756690A
; Publication No. US20030036504A1
; GENERAL INFORMATION:
;  APPLICANT: KOLTERMAN, ORVILLE G.
;  APPLICANT:  YOUNG, ANDREW A.
;  TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR MODULATION OF
;  TITLE OF INVENTION:  TRIGLYCERIDE LEVELS AND TREATMENT OF DYSLIPIDEMIA
;  FILE REFERENCE: 249/124
;  CURRENT APPLICATION NUMBER: US/09/756,690A
;  CURRENT FILING DATE:  2002-04-19
;  PRIOR APPLICATION NUMBER: 60/175,365
;  PRIOR FILING DATE: 2000-01-10
;  NUMBER OF SEQ ID NOS: 188
;  SOFTWARE: PatentIn Ver 2.1
; SEQ ID NO 2
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Heloderma suspectum
;   FEATURE:
;   OTHER INFORMATION: Exendin-4
;   FEATURE:
;   OTHER INFORMATION: c-term amidation
US-09-756-690A-2

  Query Match             96.2%;  Score 200;  DB 9;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 1.4e-18;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          | :|||||||||||||||||||||||||||||||||||||
Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 15
US-09-876-388-12
; Sequence 12, Application US/09876388
; Patent No. US20020049153A1
; GENERAL INFORMATION:
;  APPLICANT: Bridon, Dominique P.
;  APPLICANT:  L'Archeveque, Benoit
;  APPLICANT:  Ezrin, Alan M.
;  APPLICANT:  Holmes, Darren L.
;  APPLICANT:  Leblanc, Anouk
;  APPLICANT:  St. Pierre, Serge
;  TITLE OF INVENTION: LONG LASTING INSULINOTROPIC PEPTIDES
;  FILE REFERENCE: 500862001610
;  CURRENT APPLICATION NUMBER: US/09/876,388
;  CURRENT FILING DATE:  2001-09-24
;  PRIOR APPLICATION NUMBER: 09/623,618
;  PRIOR FILING DATE: 2000-09-05
;  PRIOR APPLICATION NUMBER: PCT/US00/13563
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: 60/159,783
;  PRIOR FILING DATE: 1999-10-15
;  PRIOR APPLICATION NUMBER: 60/134,406
;  PRIOR FILING DATE: 1999-05-17
;  NUMBER OF SEQ ID NOS: 35
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 39
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
;   OTHER INFORMATION: Peptide
US-09-876-388-12

  Query Match             96.2%;  Score 200;  DB 10;  Length 39;
  Best Local Similarity   94.9%;  Pred. No. 1.4e-18;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
          | :|||||||||||||||||||||||||||||||||||||
Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


Search completed: March 28, 2003, 08:41:09
Job time : 15 secs
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GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 28, 2003, 08:35:18 ; Search time 43 Seconds
(without alignments)
87.192 Million cell updates/sec

Title: US-09-756-690A-1
Perfect score: 208
Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	208	100.0	39	1	HWGH3Z	exendin-3 - Mexica
2	200	96.2	39	1	HWGH4G	exendin-4 - Gila m
3	102	49.0	101	1	GCFGB	glucagon precursor
4	101	48.6	31	2	S44472	glucagon G2 - Nort
5	99	47.6	31	2	S44471	glucagon G1 - Nort
6	99	47.6	63	1	GCIDC	glucagon precursor
7	96	46.2	30	2	S44473	glucagon-like pept
8	94	45.2	72	1	GCGXA	glucagon precursor
9	93	44.7	66	2	I51093	glucagon - chinook
10	93	44.7	178	2	I51058	glucagon I precurs
11	93	44.7	178	2	I51057	glucagon II precur
12	91	43.8	122	1	GCAF2	glucagon 2 precurs
13	90	43.3	30	2	B61125	glucagon-like pept
14	90	43.3	30	2	C61125	glucagon-like pept
15	88	42.3	29	1	GCDF	glucagon - smaller
16	88	42.3	60	1	GCONC	glucagon precursor
17	86	41.3	151	1	GCCH	glucagon precursor
18	86	41.3	206	2	I51301	proglucagon - chic
19	85	40.9	29	1	GCFLE	glucagon - Europea
20	85	40.9	29	2	S07211	glucagon - marbled
21	85	40.9	29	2	A61135	glucagon - bigeye
22	85	40.9	87	1	GCFIS	glucagon precursor
23	85	40.9	158	1	GCPG	glucagon precursor
24	85	40.9	180	1	GCHU	glucagon precursor
25	85	40.9	180	1	GCGP	glucagon precursor
26	85	40.9	180	1	GCRTDU	glucagon precursor
27	85	40.9	180	1	GCRT	glucagon precursor
28	85	40.9	180	1	GCHY	glucagon precursor
29	85	40.9	180	1	GCBO	glucagon precursor
30	85	40.9	180	2	A57294	glucagon precursor
31	84	40.4	124	1	GCAF	glucagon 1 precurs
32	83	39.9	29	1	GCCB	glucagon - Chinchi
33	82	39.4	29	2	A91741	glucagon - rabbit
34	82	39.4	29	2	A91742	glucagon - Arabian
35	82	39.4	29	2	C39258	glucagon - common
36	82	39.4	69	1	GCDG69	glucagon-69 - dog
37	81	38.9	29	2	C60840	glucagon I - Europ
38	77	37.0	29	1	GCOPV	glucagon - North A
39	77	37.0	29	2	A91740	glucagon - turkey
40	76	36.5	29	1	GCDK	glucagon - duck
41	76	36.5	29	1	A61583	glucagon - ostrich
42	76	36.5	29	1	GCEN	glucagon - elephan
43	76	36.5	29	1	GCTTS	glucagon - slider
44	76	36.5	29	2	S39018	glucagon - bowfin
45	73.5	35.3	36	2	D60840	glucagon II - Euro

ALIGNMENTS

RESULT 1
HWGH3Z
exendin-3 - Mexican beaded lizard
C;Species: Heloderma horridum (Mexican beaded lizard)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Nov-1997
C;Accession: A23674
R;Eng, J.; Andrews, P.C.; Kleinman, W.A.; Singh, L.; Raufman, J.P.
J. Biol. Chem. 265, 20259-20262, 1990
A;Title: Purification and structure of exendin-3, a new pancreatic secretagogue isc
A;Reference number: A23674; MUID:91056067; PMID:1700785
A;Accession: A23674
A;Molecule type: protein
A;Residues: 1-39 <ENG>
C;Comment: Exendins are venom components that are thought to bind to receptors for
g in secretion of amylase.
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; secretagogue; venom
F;39/Modified site: amidated carboxyl end (Ser) #status experimental

Query Match 100.0%; Score 208; DB 1; Length 39;
Best Local Similarity 100.0%; Pred. No. 4.2e-19;
Matches 39; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
||||||||||||||||||||||||||||||||||||||||
Db 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

RESULT 2
HWGH4G
exendin-4 - Gila monster
C;Species: Heloderma suspectum (Gila monster)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Nov-1997
C;Accession: A42486
R;Eng, J.; Kleinman, W.A.; Singh, L.; Singh, G.; Raufman, J.P.
J. Biol. Chem. 267, 7402-7405, 1992
A;Title: Isolation and characterization of exendin-4, an exendin-3 analogue, from H
A;Reference number: A42486; MUID:92218391; PMID:1313797
A;Accession: A42486
A;Molecule type: protein
A;Residues: 1-39 <ENG>
C;Comment: Exendin-4 does not stimulate amylase secretion by pancreatic acinar cell
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; venom
F;39/Modified site: amidated carboxyl end (Ser) #status experimental

Query Match 96.2%; Score 200; DB 1; Length 39;
Best Local Similarity 94.9%; Pred. No. 4.1e-18;
Matches 37; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
| :|||||||||||||||||||||||||||||||||||||

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Db      1 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 3
GCFGB
glucagon precursor - bullfrog (fragments)
N;Alternate names: oxyntomodulin
N;Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1; glucagon-lik
C;Species: Rana catesbeiana (bullfrog)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
C;Accession: B28091; C28091; D28091
R;Pollock, H.G.; Hamilton, J.W.; Rouse, J.B.; Ebner, K.E.; Rawitch, A.B.
J. Biol. Chem. 263, 9746-9751, 1988
A;Title: Isolation of peptide hormones from the pancreas of the bullfrog (Rana catesbeia
A;Reference number: A92730; MUID:88257102; PMID:3260236
A;Accession: B28091
A;Molecule type: protein
A;Residues: 1-36 <PO2>
A;Accession: C28091
A;Molecule type: protein
A;Residues: 37-68 <POL>
A;Accession: D28091
A;Molecule type: protein
A;Residues: 69-101 <PO3>
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-36/Product: glucagon-36 (oxyntomodulin) #status experimental <G36>
F;1-29/Product: glucagon #status predicted <GCN>
F;37-67/Product: glucagon-like peptide 1 #status experimental <GL1>
F;69-101/Product: glucagon-like peptide 2 #status experimental <GL2>

  Query Match             49.0%;  Score 102;  DB 1;  Length 101;
  Best Local Similarity   54.8%;  Pred. No. 1.5e-05;
  Matches   17;  Conservative    7;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
          |:|||||||:|  :||:| : |::||  | |
Db     37 HADGTFTSDMSSYLEEKAAKEFVDWLIKGRP 67


RESULT 4
S44472
glucagon G2 - North American paddlefish (Polyodon spathula)
C;Species: Polyodon spathula
C;Date: 19-Mar-1997 #sequence_revision 12-Dec-1997 #text_change 07-May-1999
C;Accession: S44472
R;Nguyen, T.M.; Mommsen, T.P.; Mims, S.M.; Conlon, J.M.
Biochem. J. 300, 339-345, 1994
A;Title: Characterization of insulins and proglucagon-derived peptides from a phylogenet
A;Reference number: S44467; MUID:94271144; PMID:8002937
A;Accession: S44472
A;Molecule type: protein
A;Residues: 1-31 <NGU>
A;Note: the sequence from Fig. 3 is inconsistent with that from Fig. 5 in having 29-Glu
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-31/Product: glucagon G2 #status predicted <GCN>

  Query Match             48.6%;  Score 101;  DB 2;  Length 31;
  Best Local Similarity   58.6%;  Pred. No. 5.6e-06;
  Matches   17;  Conservative    6;  Mismatches    6;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          || | ||:| || :||:: : |:||||||
Db      1 HSQGMFTNDYSKYLEEKSAKEFVEWLKNG 29


RESULT 5
S44471
glucagon G1 - North American paddlefish (Polyodon spathula)
C;Species: Polyodon spathula
C;Date: 18-Sep-1997 #sequence_revision 18-Sep-1997 #text_change 07-May-1999
C;Accession: S44471
R;Nguyen, T.M.; Mommsen, T.P.; Mims, S.M.; Conlon, J.M.
Biochem. J. 300, 339-345, 1994
A;Title: Characterization of insulins and proglucagon-derived peptides from a phyloge
A;Reference number: S44467; MUID:94271144; PMID:8002937
A;Accession: S44471
A;Molecule type: protein
A;Residues: 1-31 <NGU>
A;Experimental source: pancreas
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-31/Product: glucagon G1 #status predicted <MAT>

  Query Match             47.6%;  Score 99;  DB 2;  Length 31;
  Best Local Similarity   58.6%;  Pred. No. 9.9e-06;
  Matches   17;  Conservative    5;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          || | ||:| || :||:  : |:||||||
Db      1 HSQGMFTNDYSKYLEEKRAKEFVEWLKNG 29


RESULT 6
GCIDC
glucagon precursor - channel catfish (fragments)
C;Species: Ictalurus punctatus (channel catfish)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
C;Accession: A05166; A05167
R;Andrews, P.C.; Ronner, P.
J. Biol. Chem. 260, 3910-3914, 1985
A;Title: Isolation and structures of glucagon and glucagon-like peptide from catfish
A;Reference number: A92514; MUID:85157536; PMID:3838546
A;Accession: A05166
A;Molecule type: protein
A;Residues: 1-29 <AND1>
A;Accession: A05167
A;Molecule type: protein
A;Residues: 30-63 <AND2>
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-29/Product: glucagon #status experimental <GCN>
F;30-63/Product: glucagon-like peptide 1 #status experimental <GL1>

  Query Match             47.6%;  Score 99;  DB 1;  Length 63;
  Best Local Similarity   51.6%;  Pred. No. 2.1e-05;
  Matches   16;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
          |:|||:|||:|  ::::| : || |||:| |
Db     30 HADGTYTSDVSSYLQDQAAKDFITWLKSGQP 60


RESULT 7
S44473
glucagon-like peptide - North American paddlefish (Polyodon spathula)
C;Species: Polyodon spathula
C;Date: 18-Sep-1997 #sequence_revision 18-Sep-1997 #text_change 07-May-1999
C;Accession: S44473
R;Nguyen, T.M.; Mommsen, T.P.; Mims, S.M.; Conlon, J.M.
Biochem. J. 300, 339-345, 1994
A;Title: Characterization of insulins and proglucagon-derived peptides from a phyloge
A;Reference number: S44467; MUID:94271144; PMID:8002937
A;Accession: S44473
A;Molecule type: protein
A;Residues: 1-30 <NGU>
C;Superfamily: glucagon
C;Keywords: duplication; hormone; pancreas
F;1-30/Product: glucagon-like peptide #status predicted <MAT>

  Query Match             46.2%;  Score 96;  DB 2;  Length 30;
  Best Local Similarity   58.6%;  Pred. No. 2.2e-05;
  Matches   17;  Conservative    5;  Mismatches    7;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
```

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          |:|||:||| |  ::|:| | || ||| |
Db      1 HADGTYTSDASSFLQEQAARDFISWLKKG 29


RESULT 8
GCGXA
glucagon precursor - alligator gar (fragment)
N;Alternate names: oxyntomodulin
N;Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1
C;Species: Lepisosteus spatula (alligator gar)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998
C;Accession: S06339; S06871
R;Pollock, H.G.; Kimmel, J.R.; Ebner, K.E.; Hamilton, J.W.; Rouse, J.B.; Lance, V.; Rawi
Gen. Comp. Endocrinol. 69, 133-140, 1988
A;Title: Isolation of alligator gar (Lepisosteus spatula) glucagon, oxyntomodulin, and g
A;Reference number: S06339; MUID:88196798; PMID:3282974
A;Accession: S06339
A;Molecule type: protein
A;Residues: 1-36 <POL>
A;Accession: S06871
A;Molecule type: protein
A;Residues: 39-72 <PO2>
C;Comment: X's at positions 37-38 represent a pair of basic amino acids forming a cleava
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-36/Product: glucagon-36 (oxyntomodulin) #status experimental <G36>
F;1-29/Product: glucagon #status predicted <GCN>
F;39-70/Product: glucagon-like peptide 1 #status predicted <GL1>

  Query Match             45.2%;  Score 94;  DB 1;  Length 72;
  Best Local Similarity   48.3%;  Pred. No. 0.0001;
  Matches   14;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:|||:|  ::::| : |: ||| |
Db     39 HADGTYTSDVSSYLQDQAAKKFVTWLKQG 67


RESULT 9
I51093
glucagon - chinook salmon (fragment)
C;Species: Oncorhynchus tschawytscha (chinook salmon)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I51093
R;Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A;Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcripts
A;Reference number: A55895; MUID:95295739; PMID:7776976
A;Accession: I51093
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-66 <IRW>
A;Cross-references: EMBL:U19920; NID:g736366; PIDN:AAC59670.1; PID:g736367
C;Superfamily: glucagon
C;Keywords: duplication

  Query Match             44.7%;  Score 93;  DB 2;  Length 66;
  Best Local Similarity   48.3%;  Pred. No. 0.00012;
  Matches   14;  Conservative   10;  Mismatches    5;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:|||:|  ::::| : |: |||:|
Db     33 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 61


RESULT 10
I51058
glucagon I precursor - rainbow trout
C;Species: Oncorhynchus mykiss (rainbow trout)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I51058; I51299; I51056; I51037; I51036; I51300
R;Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A;Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcr
A;Reference number: A55895; MUID:95295739; PMID:7776976
A;Accession: I51058
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-178 <IRW>
A;Cross-references: EMBL:U19917; NID:g736364; PIDN:AAC59669.1; PID:g736365; GB:S784
A;Accession: I51299
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 52-53,'X',55-123 <IR2>
A;Cross-references: GB:S78473; NID:g999382; PIDN:AAB34504.1; PID:g999383
A;Accession: I51056
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 58-123 <IR3>
A;Cross-references: EMBL:U19913; NID:g736360; PIDN:AAC59667.1; PID:g736361
A;Accession: I51037
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 'M',114-144 <IR4>
A;Cross-references: EMBL:U19919; NID:g736374; PIDN:AAC60213.1; PID:g736377
A;Accession: I51036
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 113-123 <IR5>
A;Cross-references: EMBL:U19918; NID:g736373; PIDN:AAC60212.1; PID:g736376
C;Genetics:
A;Introns: 123/2
C;Superfamily: glucagon
C;Keywords: duplication

  Query Match             44.7%;  Score 93;  DB 2;  Length 178;
  Best Local Similarity   48.3%;  Pred. No. 0.00036;
  Matches   14;  Conservative   10;  Mismatches    5;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:|||:|  ::::| : |: |||:|
Db     90 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 118


RESULT 11
I51057
glucagon II precursor - rainbow trout
C;Species: Oncorhynchus mykiss (rainbow trout)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C;Accession: I51057; I51039; I51038
R;Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
A;Title: Trout and chicken proglucagon: alternative splicing generates mRNA transcr
A;Reference number: A55895; MUID:95295739; PMID:7776976
A;Accession: I51057
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-178 <IRW>
A;Cross-references: EMBL:U19914; NID:g736362; PIDN:AAC59668.1; PID:g736363
A;Accession: I51039
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 113-144 <IR2>
A;Cross-references: EMBL:U19916; NID:g736369; PIDN:AAC60210.1; PID:g736372
A;Accession: I51038
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 113-123 <IR3>
A;Cross-references: EMBL:U19915; NID:g736368; PIDN:AAC60209.1; PID:g736371
C;Genetics:
A;Introns: 123/2
C;Superfamily: glucagon
C;Keywords: duplication

  Query Match             44.7%;  Score 93;  DB 2;  Length 178;
  Best Local Similarity   48.3%;  Pred. No. 0.00036;
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Matches 14; Conservative 10; Mismatches 5; Indels 0; Gaps 0;

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Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:|||:|  ::::| : |: |||:|
Db     90 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 118
```

RESULT 12
GCAF2
glucagon 2 precursor - American goosefish
N;Contains: glucagon; glucagon-like peptide 1
C;Species: Lophius americanus (American goosefish)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 21-Jul-2000
C;Accession: A05150
R;Lund, P.K.; Goodman, R.H.; Montminy, M.R.; Dee, P.C.; Habener, J.F.
J. Biol. Chem. 258, 3280-3284, 1983
A;Title: Anglerfish islet pre-proglucagon II. Nucleotide and corresponding amino acid se
A;Reference number: A05150; MUID:83135785; PMID:6338015
A;Accession: A05150
A;Molecule type: mRNA
A;Residues: 1-122 <LUN>
A;Cross-references: GB:J00933; NID:g64021; PIDN:CAA23905.1; PID:g64022
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-122/Product: proglucagon 2 #status predicted <PGC2>
F;52-80/Product: glucagon #status predicted <GCN>
F;89-119/Product: glucagon-like peptide 1 #status predicted <GL1>

Query Match 43.8%; Score 91; DB 1; Length 122;
Best Local Similarity 48.3%; Pred. No. 0.00042;
Matches 14; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

```
Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:|||:|  ::::| : |: ||| |
Db     89 HADGTYTSDVSSYLQDQAAKDFVSWLKAG 117
```

RESULT 13
B61125
glucagon-like peptide - American eel
C;Species: Anguilla rostrata (American eel)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C;Accession: B61125
R;Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A;Title: The primary structure of glucagon-like peptide but not insulin has been conserv
A;Reference number: A61125; MUID:91340068; PMID:1874385
A;Accession: B61125
A;Molecule type: protein
A;Residues: 1-30 <CON>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication
F;1-30/Product: glucagon-like peptide #status experimental <GLP>
F;30/Modified site: amidated carboxyl end (Arg) #status predicted

Query Match 43.3%; Score 90; DB 2; Length 30;
Best Local Similarity 44.8%; Pred. No. 0.00012;
Matches 13; Conservative 10; Mismatches 6; Indels 0; Gaps 0;

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Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |::||:|||:|  ::::| : |: ||| |
Db      1 HAEGTYTSDVSSYLQDQAAKEFVSWLKTG 29
```

RESULT 14
C61125
glucagon-like peptide - European eel
C;Species: Anguilla anguilla (European eel)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C;Accession: C61125
R;Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A;Title: The primary structure of glucagon-like peptide but not insulin has been cons
A;Reference number: A61125; MUID:91340068; PMID:1874385
A;Accession: C61125
A;Molecule type: protein
A;Residues: 1-30 <CON>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication
F;1-30/Product: glucagon-like peptide #status experimental <GLP>
F;30/Modified site: amidated carboxyl end (Arg) #status experimental

Query Match 43.3%; Score 90; DB 2; Length 30;
Best Local Similarity 44.8%; Pred. No. 0.00012;
Matches 13; Conservative 10; Mismatches 6; Indels 0; Gaps 0;

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Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |::||:|||:|  ::::| : |: ||| |
Db      1 HAEGTYTSDVSSYLQDQAAKEFVSWLKTG 29
```

RESULT 15
GCDF
glucagon - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 20-Mar-1998
C;Accession: A26992
R;Conlon, J.M.; O'Toole, L.; Thim, L.
FEBS Lett. 214, 50-56, 1987
A;Title: Primary structure of glucagon from the gut of the common dogfish (Scyliorhin
A;Reference number: A26992; MUID:87190953; PMID:3569517
A;Accession: A26992
A;Molecule type: protein
A;Residues: 1-29 <CON>
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; intestine; pancreas

Query Match 42.3%; Score 88; DB 1; Length 29;
Best Local Similarity 53.6%; Pred. No. 0.00021;
Matches 15; Conservative 5; Mismatches 8; Indels 0; Gaps 0;

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Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
          ||:|||||| || |:    : |::|| |
Db      1 HSEGTFTSDYSKYMDNRRAKDFVQWLMN 28
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Search completed: March 28, 2003, 08:40:13
Job time : 43 secs

GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 28, 2003, 08:25:52 ; Search time 25 Seconds
(without alignments)
64.703 Million cell updates/sec

Title: US-09-756-690A-1
Perfect score: 208
Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	208	100.0	39	1	EXE3_HELHO	P20394 heloderma h
2	200	96.2	87	1	EXE4_HELSU	P26349 heloderma s
3	102	49.0	71	1	GLUC_ICTPU	P04093 ictalurus p
4	102	49.0	103	1	GLUC_RANCA	P15438 rana catesb
5	98	47.1	71	1	GLUC_PIAME	P81880 piaractus m
6	94	45.2	78	1	GLUC_LEPSP	P09566 lepisosteus
7	91	43.8	121	1	GLUC_CARAU	P79695 carassius a
8	91	43.8	122	1	GLU2_LOPAM	P04092 lophius ame
9	90	43.3	30	1	GLUM_ANGAN	P41521 anguilla an
10	88	42.3	29	1	GLUC_SCYCA	P09687 scyliorhinu
11	88	42.3	68	1	GLUC_ONCKI	P07449 oncorhynchu
12	86	41.3	151	1	GLUC_CHICK	P01277 gallus gall
13	85	40.9	29	1	GLUC_PLAFE	P23062 platichthys
14	85	40.9	29	1	GLUC_TORMA	P09567 torpedo mar
15	85	40.9	96	1	GLUC_MYOSC	P09686 myoxocephal
16	85	40.9	158	1	GLUC_PIG	P01274 sus scrofa
17	85	40.9	180	1	GLUC_BOVIN	P01272 bos taurus
18	85	40.9	180	1	GLUC_CAVPO	P05110 cavia porce
19	85	40.9	180	1	GLUC_HUMAN	P01275 homo sapien
20	85	40.9	180	1	GLUC_MESAU	P01273 mesocricetu
21	85	40.9	180	1	GLUC_MOUSE	P55095 mus musculu
22	85	40.9	180	1	GLUC_OCTDE	P22890 octodon deg
23	85	40.9	180	1	GLUC_RAT	P06883 rattus norv
24	84	40.4	36	1	GLU1_ORENI	P81026 oreochromis
25	84	40.4	124	1	GLU1_LOPAM	P01278 lophius ame
26	83	39.9	29	1	GLUC_CHIBR	P31297 chinchilla
27	82	39.4	29	1	GLUC_RABIT	P25449 oryctolagus
28	82	39.4	69	1	GLUC_CANFA	P29794 canis famil
29	79	38.0	33	1	GLU2_ORENI	P81027 oreochromis
30	77	37.0	29	1	GLUC_DIDMA	P18108 didelphis m
31	76	36.5	29	1	GLUC_ANAPL	P01276 anas platyr
32	76	36.5	29	1	GLUC_CALMI	P13189 callorhynch
33	76	36.5	75	1	GLUC_AMICA	P33528 amia calva
34	75	36.1	29	1	GLUC_LAMFL	Q9prq9 lampetra fl
35	73	35.1	36	1	GLUC_HYDCO	P09682 hydrolagus
36	67	32.2	38	1	EXE1_HELSU	P04203 heloderma s
37	62	29.8	27	1	SECR_CANFA	P09910 canis famil
38	61	29.3	131	1	SECR_PIG	P01279 sus scrofa
39	61	29.3	170	1	VIP_HUMAN	P01282 homo sapien
40	60.5	29.1	1590	1	GCN2_YEAST	P15442 saccharomyc
41	60	28.8	121	1	SECR_HUMAN	P09683 homo sapien
42	60	28.8	134	1	SECR_RAT	P11384 rattus norv
43	59	28.4	27	1	SECR_SHEEP	P31299 ovis aries
44	59	28.4	72	1	VIP_CAVPO	P04566 cavia porce
45	59	28.4	170	1	VIP_RAT	P01283 rattus norv

ALIGNMENTS

```
RESULT 1
EXE3_HELHO
ID   EXE3_HELHO     STANDARD;      PRT;    39 AA.
AC   P20394;
DT   01-FEB-1991 (Rel. 17, Created)
DT   01-FEB-1991 (Rel. 17, Last sequence update)
DT   15-JUN-2002 (Rel. 41, Last annotation update)
DE   Exendin-3.
OS   Heloderma horridum horridum (Mexican beaded lizard).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Helodermatidae;
OC   Heloderma.
OX   NCBI_TaxID=8552;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Venom;
RX   MEDLINE=91056067; PubMed=1700785;
RA   Eng J., Andrew P.C., Kleinman W.A., Singh L., Raufman J.-P.;
RT   "Purification and structure of exendin-3, a new pancreatic
RT   secretagogue isolated from Heloderma horridum venom.";
RL   J. Biol. Chem. 265:20259-20262(1990).
CC   -!- FUNCTION: HAS A VIP/SECRETIN-LIKE BIOLOGICAL ACTIVITY. INTERACTS
CC       WITH THE EXENDIN RECEPTOR.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Produced by the venomous gland.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; A23674; HWGH3Z.
DR   HSSP; P01275; 1BH0.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Toxin; Amidation.
FT   MOD_RES      39      39       AMIDATION.
SQ   SEQUENCE   39 AA;  4204 MW;  A44251D3A4B1D1B9 CRC64;

  Query Match          100.0%;  Score 208;  DB 1;  Length 39;
  Best Local Similarity  100.0%;  Pred. No. 1.9e-20;
  Matches   39;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
           |||||||||||||||||||||||||||||||||||||||
Db       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39


RESULT 2
EXE4_HELSU
ID   EXE4_HELSU     STANDARD;      PRT;    87 AA.
AC   P26349;
DT   01-MAY-1992 (Rel. 22, Created)
DT   15-JUL-1998 (Rel. 36, Last sequence update)
DT   15-JUN-2002 (Rel. 41, Last annotation update)
DE   Exendin-4 precursor.
OS   Heloderma suspectum (Gila monster).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Helodermatidae;
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OC   Heloderma.
OX   NCBI_TaxID=8554;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=97172477; PubMed=9020121;
RA   Chen Y.E., Drucker D.J.;
RT   "Tissue-specific expression of unique mRNAs that encode proglucagon-
RT   derived peptides or exendin 4 in the lizard.";
RL   J. Biol. Chem. 272:4108-4115(1997).
RN   [2]
RP   SEQUENCE OF 48-86.
RC   TISSUE=Venom;
RX   MEDLINE=92218391; PubMed=1313797;
RA   Eng J., Kleinman W.A., Singh L., Singh G., Raufman J.-P.;
RT   "Isolation and characterization of exendin-4, an exendin-3 analogue,
RT   from Heloderma suspectum venom. Further evidence for an exendin
RT   receptor on dispersed acini from guinea pig pancreas.";
RL   J. Biol. Chem. 267:7402-7405(1992).
CC   -!- FUNCTION: HAS A VIP/SECRETIN-LIKE BIOLOGICAL ACTIVITY. INTERACTS
CC       WITH THE EXENDIN RECEPTOR.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Produced by the venomous gland.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U77613; AAB51130.1; -.
DR   PIR; A42486; HWGH4G.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Toxin; Amidation; Signal.
FT   SIGNAL       1     23       POTENTIAL.
FT   PEPTIDE      48    86       EXENDIN-4.
FT   MOD_RES      86    86       AMIDATION (G-87 PROVIDE AMIDE GROUP).
SQ   SEQUENCE   87 AA;  9479 MW;  656BA6E3D87454A2 CRC64;

  Query Match             96.2%;  Score 200;  DB 1;  Length 87;
  Best Local Similarity   94.9%;  Pred. No. 5.1e-19;
  Matches   37;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
           | :||||||||||||||||||||||||||||||||||||
Db      48 HGEGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 86


RESULT 3
GLUC_ICTPU
ID   GLUC_ICTPU     STANDARD;      PRT;    71 AA.
AC   P04093;
DT   01-NOV-1986 (Rel. 03, Created)
DT   01-MAR-1989 (Rel. 10, Last sequence update)
DT   01-NOV-1990 (Rel. 16, Last annotation update)
DE   Glucagon precursor (Fragment).
OS   Ictalurus punctatus (Channel catfish).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Siluriformes;
OC   Ictaluridae; Ictalurus.
OX   NCBI_TaxID=7998;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=87156787; PubMed=3030323;
RA   Hoosein N.M., Mahrenholz A.M., Andrews P.C., Gurd R.S.;
RT   "Biological activities of catfish glucagon and glucagon-like
RT   peptide.";
RL   Biochem. Biophys. Res. Commun. 143:87-92(1987).
RN   [2]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=85157536; PubMed=3838546;
RA   Andrews P.C., Ronner P.;
RT   "Isolation and structures of glucagon and glucagon-like peptide from
RT   catfish pancreas.";
RL   J. Biol. Chem. 260:3910-3914(1985).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       AMERICAN GOOSEFISH SEQUENCES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; A05166; GCIDC.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone.
FT   NON_TER      1      1
FT   PEPTIDE      1      29       GLUCAGON.
FT   PEPTIDE      38     71       GLUCAGON-LIKE PEPTIDE.
FT   CONFLICT     53     53       E -> D (IN REF. 2).
FT   NON_TER      71     71
SQ   SEQUENCE   71 AA;  8173 MW;  24688E79AD981A8F CRC64;

  Query Match             49.0%;  Score 102;  DB 1;  Length 71;
  Best Local Similarity   54.8%;  Pred. No. 1.6e-06;
  Matches   17;  Conservative    8;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
           |:|||:|||:|  ::|:| : || |||:| |
Db      38 HADGTYTSDVSSYLQEQAAKDFITWLKSGQP 68


RESULT 4
GLUC_RANCA
ID   GLUC_RANCA     STANDARD;      PRT;    103 AA.
AC   P15438; P15439; P15440;
DT   01-APR-1990 (Rel. 14, Created)
DT   01-JUL-1993 (Rel. 26, Last sequence update)
DT   01-JUL-1993 (Rel. 26, Last annotation update)
DE   Glucagon precursor (Fragments).
OS   Rana catesbeiana (Bull frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX   NCBI_TaxID=8400;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=88257102; PubMed=3260236;
RA   Pollock H.G., Hamilton J.W., Rouse J.B., Ebner K.E., Rawitch A.B.;
RT   "Isolation of peptide hormones from the pancreas of the bullfrog
RT   (Rana catesbeiana). Amino acid sequences of pancreatic polypeptide,
RT   oxyntomodulin, and two glucagon-like peptides.";
RL   J. Biol. Chem. 263:9746-9751(1988).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       OTHER SPECIES SEQUENCES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; B28091; GCFGB.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 3.
DR   PROSITE; PS00260; GLUCAGON; 3.
```

```
KW   Glucagon family; Hormone.
FT   PEPTIDE       1     29       GLUCAGON.
FT   PEPTIDE       1     36       GLUCAGON-36 (OXYNTOMODULIN).
FT   PEPTIDE      39     70       GLUCAGON-LIKE PEPTIDE 1.
FT   NON_CONS     70     71
FT   PEPTIDE      71    103       GLUCAGON-LIKE PEPTIDE 2.
SQ   SEQUENCE   103 AA;  11719 MW;  316287B7BAE1C8F7 CRC64;

  Query Match             49.0%;  Score 102;  DB 1;  Length 103;
  Best Local Similarity   54.8%;  Pred. No. 2.4e-06;
  Matches   17;  Conservative    7;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
           |:||||||:|  :||:| : |::||  | |
Db      39 HADGTFTSDMSSYLEEKAAKEFVDWLIKGRP 69


RESULT 5
GLUC_PIAME
ID   GLUC_PIAME     STANDARD;      PRT;    71 AA.
AC   P81880;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   30-MAY-2000 (Rel. 39, Last annotation update)
DE   Glucagon precursor (Fragment).
OS   Piaractus mesopotamicus (Pacu).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Characiformes;
OC   Characidae; Piaractus.
OX   NCBI_TaxID=42528;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=99259587; PubMed=10327603;
RA   de Lima J.A., Oliveira B.; Conlon J.M.;
RT   "Purification and characterization of insulin and peptides derived
RT   from proglucagon and prosomatostatin from the fruit-eating fish, the
RT   pacu Piaractus mesopotamicus.";
RL   Comp. Biochem. Physiol. 122B:127-135(1999).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       OTHER FISH SEQUENCES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone.
FT   NON_TER       1      1
FT   PEPTIDE       1     29       GLUCAGON.
FT   PEPTIDE      38     71       GLUCAGON-LIKE PEPTIDE.
FT   NON_TER      71     71
SQ   SEQUENCE   71 AA;  8146 MW;  F66A3CA2DD9806C5 CRC64;

  Query Match             47.1%;  Score 98;  DB 1;  Length 71;
  Best Local Similarity   51.6%;  Pred. No. 5.2e-06;
  Matches   16;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
           |:|||:|||:|  ::::| : || |||:| |
Db      38 HADGTYTSDVSAYLQDQAAKDFITWLKSGQP 68


RESULT 6
GLUC_LEPSP
ID   GLUC_LEPSP     STANDARD;      PRT;    78 AA.
AC   P09566;
DT   01-MAR-1989 (Rel. 10, Created)
DT   01-NOV-1990 (Rel. 16, Last sequence update)
DT   16-OCT-2001 (Rel. 40, Last annotation update)
DE   Glucagon precursor [Contains: Glucagon; Glucagon-36 (Oxyntomodulin);
DE   Glucagon-like peptide] (Fragment).
OS   Lepisosteus spatula (Alligator gar) (Atractosteus spatula).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Semionotiformes; Lepisosteidae;
OC   Lepisosteus.
OX   NCBI_TaxID=7917;
RN   [1]
RP   SEQUENCE OF 1-36 AND 45-78.
RC   TISSUE=Pancreas;
RX   MEDLINE=88196798; PubMed=3282974;
RA   Pollock H.G., Kimmel J.R., Ebner K.E., Hamilton J.W., Rouse J.B.,
RA   Lance V., Rawitch A.B.;
RT   "Isolation of alligator gar (Lepisosteus spatula) glucagon,
RT   oxyntomodulin, and glucagon-like peptide: amino acid sequences of
RT   oxyntomodulin and glucagon-like peptide.";
RL   Gen. Comp. Endocrinol. 69:133-140(1988).
RN   [2]
RP   PRELIMINARY SEQUENCE OF 1-29.
RC   TISSUE=Pancreas;
RX   MEDLINE=88030594; PubMed=3311873;
RA   Pollock H.G., Kimmel J.R., Hamilton J.W., Rouse J.B., Ebner K.E.,
RA   Lance V., Rawitch A.B.;
RT   "Isolation and structures of alligator gar (Lepisosteus spatula)
RT   insulin and pancreatic polypeptide.";
RL   Gen. Comp. Endocrinol. 67:375-382(1987).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       AMERICAN GOOSEFISH SEQUENCES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; S06339; GCGXA.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone.
FT   PEPTIDE       1     29       GLUCAGON.
FT   PEPTIDE       1     36       GLUCAGON-36.
FT   PEPTIDE      45     78       GLUCAGON-LIKE PEPTIDE.
SQ   SEQUENCE   78 AA;  8990 MW;  30106496271594E0 CRC64;

  Query Match             45.2%;  Score 94;  DB 1;  Length 78;
  Best Local Similarity   48.3%;  Pred. No. 1.9e-05;
  Matches   14;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |:|||:|||:|  ::::| : |: ||| |
Db      45 HADGTYTSDVSSYLQDQAAKKFVTWLKQG 73


RESULT 7
GLUC_CARAU
ID   GLUC_CARAU     STANDARD;      PRT;   121 AA.
AC   P79695;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   16-OCT-2001 (Rel. 40, Last annotation update)
DE   Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
DE   Glucagon; Glucagon-like peptide].
OS   Carassius auratus (Goldfish).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Carassius.
OX   NCBI_TaxID=7957;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Yuen T.T.H., Mok P.Y., Chow B.K.C.;
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RL   Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC   ---------------------------------------------------------------------
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CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U65528; AAB39563.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT   SIGNAL       1     21       POTENTIAL.
FT   PEPTIDE      22    47       GLICENTIN-RELATED POLYPEPTIDE.
FT   PEPTIDE      50    78       GLUCAGON.
FT   PROPEP       80    85
FT   PEPTIDE      88    121      GLUCAGON-LIKE PEPTIDE.
SQ   SEQUENCE   121 AA;  13527 MW;  5C1D4BEC1D26B9C6 CRC64;

  Query Match             43.8%;  Score 91;  DB 1;  Length 121;
  Best Local Similarity   45.2%;  Pred. No. 7.6e-05;
  Matches   14;  Conservative   10;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGP 31
           |::||:|||:|  : ::| : |: |||:| |
Db      88 HAEGTYTSDISSFLRDQAAQNFVAWLKSGQP 118


RESULT 8
GLU2_LOPAM
ID   GLU2_LOPAM     STANDARD;      PRT;   122 AA.
AC   P04092;
DT   01-NOV-1986 (Rel. 03, Created)
DT   01-NOV-1986 (Rel. 03, Last sequence update)
DT   16-OCT-2001 (Rel. 40, Last annotation update)
DE   Glucagon II precursor [Contains: Glicentin-related polypeptide (GRPP);
DE   Glucagon II; Glucagon-like peptide II].
OS   Lophius americanus (American goosefish) (Anglerfish).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Paracanthopterygii; Lophiiformes; Lophiidae; Lophius.
OX   NCBI_TaxID=8073;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=83135785; PubMed=6338015;
RA   Lund P.K., Goodman R.H., Montminy M.R., Dee P.C., Habener J.F.;
RT   "Anglerfish islet pre-proglucagon II. Nucleotide and corresponding
RT   amino acid sequence of the cDNA.";
RL   J. Biol. Chem. 258:3280-3284(1983).
RN   [2]
RP   PROCESSING.
RX   MEDLINE=86286913; PubMed=3526301;
RA   Noe B.D., Andrews P.C.;
RT   "Specific glucagon-related peptides isolated from anglerfish islets
RT   are metabolic cleavage products of (pre)proglucagon-II.";
RL   Peptides 7:331-339(1986).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC   ---------------------------------------------------------------------
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CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; V00632; CAA23905.1; -.
DR   PIR; A05150; GCAF2.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal.
FT   SIGNAL       1     21
FT   PEPTIDE      22    49       GLICENTIN-RELATED POLYPEPTIDE.
FT   PEPTIDE      52    80       GLUCAGON II.
FT   PROPEP       83    86
FT   PEPTIDE      89    119      GLUCAGON-LIKE PEPTIDE II.
SQ   SEQUENCE   122 AA;  14171 MW;  5140AC47EF915519 CRC64;

  Query Match             43.8%;  Score 91;  DB 1;  Length 122;
  Best Local Similarity   48.3%;  Pred. No. 7.7e-05;
  Matches   14;  Conservative    9;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |:|||:|||:|  ::::| : |: ||| |
Db      89 HADGTYTSDVSSYLQDQAAKDFVSWLKAG 117


RESULT 9
GLUM_ANGAN
ID   GLUM_ANGAN     STANDARD;      PRT;    30 AA.
AC   P41521;
DT   01-NOV-1995 (Rel. 32, Created)
DT   01-NOV-1995 (Rel. 32, Last sequence update)
DT   01-NOV-1995 (Rel. 32, Last annotation update)
DE   Glucagon-like peptide (GLP).
OS   Anguilla anguilla (European freshwater eel), and
OS   Anguilla rostrata (American eel).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
OC   Anguilla.
OX   NCBI_TaxID=7936, 7938;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=91340068; PubMed=1874385;
RA   Conlon J.M., Andrews P.C., Thim L., Moon T.W.;
RT   "The primary structure of glucagon-like peptide but not insulin has
RT   been conserved between the American eel, Anguilla rostrata and the
RT   European eel, Anguilla anguilla.";
RL   Gen. Comp. Endocrinol. 82:23-32(1991).
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; B61125; B61125.
DR   PIR; C61125; C61125.
DR   HSSP; P01275; 1BH0.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Amidation.
FT   MOD_RES      30     30       AMIDATION.
SQ   SEQUENCE   30 AA;  3376 MW;  592DA5EABD6E49D0 CRC64;

  Query Match             43.3%;  Score 90;  DB 1;  Length 30;
  Best Local Similarity   44.8%;  Pred. No. 2.1e-05;
  Matches   13;  Conservative   10;  Mismatches    6;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |::||:|||:|  ::::| : |: ||| |
```

```
Db      1 HAEGTYTSDVSSYLQDQAAKEFVSWLKTG 29


RESULT 10
GLUC_SCYCA
ID   GLUC_SCYCA     STANDARD;      PRT;    29 AA.
AC   P09687;
DT   01-MAR-1989 (Rel. 10, Created)
DT   01-MAR-1989 (Rel. 10, Last sequence update)
DT   01-JAN-1990 (Rel. 13, Last annotation update)
DE   Glucagon.
OS   Scyliorhinus canicula (Spotted dogfish) (Spotted catshark).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC   Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
OC   Scyliorhinidae; Scyliorhinus.
OX   NCBI_TaxID=7830;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=87190953; PubMed=3569517;
RA   Conlon J.M., O'Toole L., Thim L.;
RT   "Primary structure of glucagon from the gut of the common dogfish
RT   (Scyliorhinus canicula).";
RL   FEBS Lett. 214:50-56(1987).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; A26992; GCDF.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Hormone.
SQ   SEQUENCE   29 AA;  3529 MW;  6FA96392086F0226 CRC64;

  Query Match           42.3%;  Score 88;  DB 1;  Length 29;
  Best Local Similarity  53.6%;  Pred. No. 3.6e-05;
  Matches   15;  Conservative    5;  Mismatches    8;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
          ||:|||||| || |:    : |::|| |
Db      1 HSEGTFTSDYSKYMDNRRAKDFVQWLMN 28


RESULT 11
GLUC_ONCKI
ID   GLUC_ONCKI     STANDARD;      PRT;    68 AA.
AC   P07449;
DT   01-APR-1988 (Rel. 07, Created)
DT   01-APR-1988 (Rel. 07, Last sequence update)
DT   01-NOV-1990 (Rel. 16, Last annotation update)
DE   Glucagon precursor (Fragment).
OS   Oncorhynchus kisutch (Coho salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8019;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=86234328; PubMed=3520699;
RA   Plisetskaya E., Pollock H.G., Rouse J.B., Hamilton J.W., Kimmel J.R.,
RA   Gorbman A.;
RT   "Isolation and structures of coho salmon (Oncorhynchus kisutch)
RT   glucagon and glucagon-like peptide.";
RL   Regul. Pept. 14:57-67(1986).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       AMERICAN GOOSEFISH SEQUENCES.
CC   -!- MISCELLANEOUS: GLN-14 IS A UNIQUE SUBSTITUTION FROM LEUCINE IN
CC       OTHER KNOWN GLUCAGON SEQUENCES AND GLUCAGON-LIKE PEPTIDES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; JP0103; GCONC.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone.
FT   NON_TER       1      1
FT   PEPTIDE       1     29       GLUCAGON.
FT   PEPTIDE      38     68       GLUCAGON-LIKE PEPTIDE.
FT   NON_TER      68     68
SQ   SEQUENCE   68 AA;  7810 MW;  50D14214FF204C04 CRC64;

  Query Match           42.3%;  Score 88;  DB 1;  Length 68;
  Best Local Similarity  44.8%;  Pred. No. 9.6e-05;
  Matches   13;  Conservative   11;  Mismatches    5;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|||:||::|  ::::| : |: |||:|
Db     38 HADGTYTSNVSTYLQDQAAKDFVSWLKSG 66


RESULT 12
GLUC_CHICK
ID   GLUC_CHICK     STANDARD;      PRT;   151 AA.
AC   P01277;
DT   21-JUL-1986 (Rel. 01, Created)
DT   01-AUG-1990 (Rel. 15, Last sequence update)
DT   15-JUL-1999 (Rel. 38, Last annotation update)
DE   Glucagon precursor.
OS   Gallus gallus (Chicken), and
OS   Meleagris gallopavo (Common turkey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031, 9103;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   SPECIES=Chicken; TISSUE=Pancreas;
RX   MEDLINE=90249492; PubMed=2338135;
RA   Hasegawa S., Terazono K., Nata K., Takada T., Yamamoto H.,
RA   Okamoto H.;
RT   "Nucleotide sequence determination of chicken glucagon precursor
RT   cDNA. Chicken preproglucagon does not contain glucagon-like peptide
RT   II.";
RL   FEBS Lett. 264:117-120(1990).
RN   [2]
RP   SEQUENCE OF 55-83.
RC   SPECIES=Chicken;
RX   MEDLINE=76069271; PubMed=1194290;
RA   Pollock H.G., Kimmel J.R.;
RT   "Chicken glucagon. Isolation and amino acid sequence studies.";
RL   J. Biol. Chem. 250:9377-9380(1975).
RN   [3]
RP   COMPOSITION, AND SEQUENCE OF 55-83.
RC   SPECIES=M.gallopavo;
RX   MEDLINE=73074118; PubMed=4645932;
RA   Markussen J., Frandsen E.K., Heding L.G., Sundby F.;
RT   "Turkey glucagon: crystallization, amino acid composition and
RT   immunology.";
RL   Horm. Metab. Res. 4:360-363(1972).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: THE COMPOSITION OF TURKEY GLUCAGON APPEARS TO BE
CC       IDENTICAL WITH CHICKEN.
CC   -!- MISCELLANEOUS: CHICKEN PREPROGLUCAGON DOES NOT CONTAIN
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CC       GLUCAGON-LIKE PEPTIDE II.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; Y07539; CAA68827.1; -.
DR   PIR; S09992; GCCH.
DR   PIR; A91740; A91740.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 3.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW   Amidation.
FT   SIGNAL       1     22
FT   CHAIN       23    151       PROGLUCAGON.
FT   PEPTIDE     55     83       GLUCAGON.
FT   PROPEP      86    118
FT   PEPTIDE    118    147       GLUCAGON-LIKE PEPTIDE.
FT   MOD_RES    147    147       AMIDATION (G-148 PROVIDE AMIDE GROUP).
SQ   SEQUENCE   151 AA;  17520 MW;  B6C0D87536C0AEB5 CRC64;

  Query Match             41.3%;  Score 86;  DB 1;  Length 151;
  Best Local Similarity   48.3%;  Pred. No. 0.00043;
  Matches   14;  Conservative    8;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |::||:|||::  :| :| : || || ||
Db     118 HAEGTYTSDITSYLEGQAAKEFIAWLVNG 146


RESULT 13
GLUC_PLAFE
ID   GLUC_PLAFE     STANDARD;      PRT;    29 AA.
AC   P23062;
DT   01-NOV-1991 (Rel. 20, Created)
DT   01-NOV-1991 (Rel. 20, Last sequence update)
DT   01-JUN-1994 (Rel. 29, Last annotation update)
DE   Glucagon.
OS   Platichthys flesus (European flounder), and
OS   Thunnus obesus (Bigeye tuna).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
OC   Pleuronectoidei; Pleuronectidae; Platichthys.
OX   NCBI_TaxID=8260, 8241;
RN   [1]
RP   SEQUENCE.
RC   SPECIES=P.flesus;
RX   MEDLINE=87219793; PubMed=3556313;
RA   Conlon J.M., Davis M.S., Thim L.;
RT   "Primary structure of insulin and glucagon from the flounder
RT   (Platichthys flesus).";
RL   Gen. Comp. Endocrinol. 66:203-209(1987).
RN   [2]
RP   SEQUENCE.
RC   SPECIES=T.obesus; TISSUE=Pancreas;
RX   MEDLINE=92009094; PubMed=1916209;
RA   Navarro I., Gutierrez J., Caixach J., Rivera J., Planas J.;
RT   "Isolation and primary structure of glucagon from the endocrine
RT   pancreas of Thunnus obesus.";
RL   Gen. Comp. Endocrinol. 83:227-232(1991).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; S09348; GCFLE.
DR   PIR; A61135; A61135.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Hormone.
SQ   SEQUENCE   29 AA;  3508 MW;  77D5943208662E52 CRC64;

  Query Match             40.9%;  Score 85;  DB 1;  Length 29;
  Best Local Similarity   50.0%;  Pred. No. 8.8e-05;
  Matches   14;  Conservative    7;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
           ||:|||::| || :|    : |::||||
Db       1 HSEGTFSNDYSKYLETRRAQDFVQWLKN 28


RESULT 14
GLUC_TORMA
ID   GLUC_TORMA     STANDARD;      PRT;    29 AA.
AC   P09567;
DT   01-MAR-1989 (Rel. 10, Created)
DT   01-MAR-1989 (Rel. 10, Last sequence update)
DT   01-MAR-1989 (Rel. 10, Last annotation update)
DE   Glucagon.
OS   Torpedo marmorata (Marbled electric ray).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC   Elasmobranchii; Squalea; Hypnosqualea; Pristiorajea; Batoidea;
OC   Torpediniformes; Torpedinoidei; Torpedinidae; Torpedo.
OX   NCBI_TaxID=7788;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Pancreas;
RX   MEDLINE=86083105; PubMed=4076759;
RA   Conlon J.M., Thim L.;
RT   "Primary structure of glucagon from an elasmobranchian fish. Torpedo
RT   marmorata.";
RL   Gen. Comp. Endocrinol. 60:398-405(1985).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; S07211; S07211.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Glucagon family; Hormone.
SQ   SEQUENCE   29 AA;  3511 MW;  04D96392086F0227 CRC64;

  Query Match             40.9%;  Score 85;  DB 1;  Length 29;
  Best Local Similarity   50.0%;  Pred. No. 8.8e-05;
  Matches   14;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
           ||:|||||| || ::    : |::|| |
Db       1 HSEGTFTSDYSKYLDNRRAKDFVQWLMN 28


RESULT 15
GLUC_MYOSC
ID   GLUC_MYOSC     STANDARD;      PRT;    96 AA.
AC   P09686;
DT   01-MAR-1989 (Rel. 10, Created)
DT   01-MAR-1989 (Rel. 10, Last sequence update)
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DT   16-OCT-2001 (Rel. 40, Last annotation update)
DE   Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
DE   Glucagon; Glucagon-like peptide] (Fragment).
OS   Myoxocephalus scorpius (Shorthorn sculpin) (Daddy sculpin).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Scorpaeniformes;
OC   Cottoidei; Cottidae; Myoxocephalus.
OX   NCBI_TaxID=8097;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=87161872; PubMed=3549298;
RA   Conlon J.M., Falkmer S., Thim L.;
RT   "Primary structures of three fragments of proglucagon from the
RT   pancreatic islets of the daddy Sculpin (Cottus scorpius).";
RL   Eur. J. Biochem. 164:117-122(1987).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
CC       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
CC       AMERICAN GOOSEFISH SEQUENCES.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   PIR; A27188; GCFIS.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues.
FT   NON_TER       1      1
FT   PEPTIDE       1     26       GLICENTIN-RELATED POLYPEPTIDE.
FT   PEPTIDE      29     57       GLUCAGON.
FT   PEPTIDE      66     96       GLUCAGON-LIKE PEPTIDE.
FT   NON_TER      96     96
SQ   SEQUENCE   96 AA;  10744 MW;  C9900574FDB85750 CRC64;

  Query Match             40.9%;  Score 85;  DB 1;  Length 96;
  Best Local Similarity   50.0%;  Pred. No. 0.00035;
  Matches   14;  Conservative    7;  Mismatches    7;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
           ||:|||::| || :|    : |::||||
Db      29 HSEGTFSNDYSKYLETRRAQDFVQWLKN 56


Search completed: March 28, 2003, 08:37:51
Job time : 25 secs
```

GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 28, 2003, 08:33:48 ; Search time 85 Seconds
(without alignments)
94.539 Million cell updates/sec

Title: US-09-756-690A-1
Perfect score: 208
Sequence: 1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 671580 seqs, 206047115 residues

Total number of hits satisfying chosen parameters: 671580

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_rvirus:*
16: sp_bacteriap:*
17: sp_archeap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	117	56.2	266	13	O42143	O42143 xenopus lae
2	109	52.4	219	13	O42144	O42144 xenopus lae
3	99	47.6	220	13	Q8UWL9	Q8uwl9 hoplobatrac
4	93	44.7	72	13	Q91409	Q91409 oncorhynchu
5	93	44.7	178	13	Q91971	Q91971 oncorhynchu
6	93	44.7	178	13	Q91189	Q91189 oncorhynchu
7	87.5	42.1	62	13	Q9PRW9	Q9prw9 scyliorhinu
8	87.5	42.1	160	13	Q9PUR1	Q9pur1 petromyzon
9	87	41.8	204	13	O12956	O12956 heloderma s
10	86	41.3	206	13	Q91410	Q91410 gallus gall
11	85	40.9	180	6	Q95LG0	Q95lg0 canis famil
12	83	39.9	120	13	Q9PUR0	Q9pur0 petromyzon
13	83	39.9	121	13	Q9DDE6	Q9dde6 brachydanio
14	79	38.0	96	13	Q9DG43	Q9dg43 ambloplites
15	62	29.8	347	16	Q92XW3	Q92xw3 rhizobium m
16	61	29.3	193	5	Q9V712	Q9v712 drosophila
17	57.5	27.6	239	3	Q9USQ8	Q9usq8 schizosacch
18	57.5	27.6	558	10	Q8S3P9	Q8s3p9 oryza sativ
19	57	27.4	614	16	Q9K5S1	Q9k5s1 bacillus ha
20	56.5	27.2	200	2	Q936E2	Q936e2 streptococc
21	56.5	27.2	298	2	Q9AL20	Q9al20 enterococcu
22	56.5	27.2	298	2	Q9XD90	Q9xd90 clostridium
23	56.5	27.2	608	10	O22678	O22678 avena sativ
24	56	26.9	171	11	Q9D2Z7	Q9d2z7 mus musculu
25	56	26.9	652	10	Q9M4E7	Q9m4e7 cucumis sat
26	56	26.9	991	10	Q8VZG7	Q8vzg7 arabidopsis
27	56	26.9	1051	10	Q9LY25	Q9ly25 arabidopsis
28	56	26.9	2127	12	O57294	O57294 rabies viru
29	56	26.9	2127	12	Q9JH63	Q9jh63 rabies viru
30	55.5	26.7	660	10	Q9LR67	Q9lr67 arabidopsis
31	55.5	26.7	1272	13	Q90924	Q90924 gallus gall
32	55.5	26.7	1369	13	O42414	O42414 gallus gall
33	55	26.4	188	2	Q49387	Q49387 mycoplasma
34	55	26.4	192	2	Q49390	Q49390 mycoplasma
35	55	26.4	790	5	Q20949	Q20949 caenorhabdi
36	54.5	26.2	132	10	Q9XID9	Q9xid9 arabidopsis
37	54.5	26.2	132	10	Q9SXC1	Q9sxc1 arabidopsis
38	54.5	26.2	379	2	O85863	O85863 sphingomona
39	54.5	26.2	491	5	Q8T0N0	Q8t0n0 drosophila
40	54.5	26.2	610	5	Q9W4Z5	Q9w4z5 drosophila
41	54.5	26.2	913	5	Q8T2W6	Q8t2w6 trypanosoma
42	54.5	26.2	1545	16	Q9RDQ1	Q9rdq1 streptomyce
43	54	26.0	132	7	Q95HK0	Q95hk0 homo sapien
44	54	26.0	309	5	O02163	O02163 caenorhabdi
45	54	26.0	310	17	Q9YE06	Q9ye06 aeropyrum p

ALIGNMENTS

RESULT 1
O42143
ID O42143 PRELIMINARY; PRT; 266 AA.
AC O42143;
DT 01-JAN-1998 (TrEMBLrel. 05, Created)
DT 01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
DT 01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE Glucagon I precursor [Contains: Glucagon; glucagon-like peptide 1A
DE (GLP-1A); glucagon-like peptide 1B (GLP-1B); glucagon-like peptide 1C
DE (GLP-1C); glucagon-like peptide 2 (GLP-2)].
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC TISSUE=PANCREAS;
RX MEDLINE=97368292; PubMed=9223287;
RA Irwin D.M., Satkunarajah M., Wen Y., Brubaker P.L., Pederson R.A.,
RA Wheeler M.B.;
RT "The Xenopus proglucagon gene encodes novel GLP-1-like peptides with
RT insulinotropic properties.";
RL Proc. Natl. Acad. Sci. U.S.A. 94:7915-7920(1997).
CC -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC THE BLOOD SUGAR LEVEL.
CC -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1 (SHOWN HERE) AND 2; ARE
CC PRODUCED BY ALTERNATIVE SPLICING.
CC -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR EMBL; AF004432; AAB65660.1; -.
DR HSSP; P01274; 1GCN.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; hormone2; 5.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 5.
DR PROSITE; PS00260; GLUCAGON; 5.
KW Glucagon family; Hormone; Signal; Cleavage on pair of basic residues;
KW Multigene family; Alternative splicing.
FT SIGNAL 1 ? POTENTIAL.

```
FT   PEPTIDE      53     81       GLUCAGON.
FT   PEPTIDE      97    133       GLUCAGON-LIKE PEPTIDE 1A.
FT   PEPTIDE     142    173       GLUCAGON-LIKE PEPTIDE 1B.
FT   PEPTIDE     180    211       GLUCAGON-LIKE PEPTIDE 1C.
FT   PEPTIDE     227    259       GLUCAGON-LIKE PEPTIDE 2.
FT   VARSPLIC    214    261       MISSING (IN ISOFORM 2).
SQ   SEQUENCE   266 AA;  30951 MW;  544F7BBC20AF872C CRC64;

  Query Match             56.2%;  Score 117;  DB 13;  Length 266;
  Best Local Similarity   59.4%;  Pred. No. 1.5e-07;
  Matches   19;  Conservative   10;  Mismatches    3;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPS 32
           |::|||||:::|::|:| : ||:|| |||||
Db      97 HAEGTFTSDVTQQLDEKAAKEFIDWLINGGPS 128


RESULT 2
O42144
ID   O42144      PRELIMINARY;      PRT;   219 AA.
AC   O42144;
DT   01-JAN-1998 (TrEMBLrel. 05, Created)
DT   01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
DT   01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE   Glucagon II precursor [Contains: Glucagon; glucagon-like peptide 1A
DE   (GLP-1A); glucagon-like peptide 1B (GLP-1B); glucagon-like peptide 1C
DE   (GLP-1C)].
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=PANCREAS;
RX   MEDLINE=97368292; PubMed=9223287;
RA   Irwin D.M., Satkunarajah M., Wen Y., Brubaker P.L., Pederson R.A.,
RA   Wheeler M.B.;
RT   "The Xenopus proglucagon gene encodes novel GLP-1-like peptides with
RT   insulinotropic properties.";
RL   Proc. Natl. Acad. Sci. U.S.A. 94:7915-7920(1997).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; AF004433; AAB65661.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 4.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 4.
DR   PROSITE; PS00260; GLUCAGON; 3.
KW   Glucagon family; Hormone; Signal; Cleavage on pair of basic residues;
KW   Multigene family.
FT   SIGNAL       1     20       POTENTIAL.
FT   PEPTIDE      53    81       GLUCAGON.
FT   PEPTIDE      97    133      GLUCAGON-LIKE PEPTIDE 1A.
FT   PEPTIDE     142    173      GLUCAGON-LIKE PEPTIDE 1B.
FT   PEPTIDE     180    211      GLUCAGON-LIKE PEPTIDE 1C.
SQ   SEQUENCE   219 AA;  25271 MW;  ACC699233C362CE0 CRC64;

  Query Match             52.4%;  Score 109;  DB 13;  Length 219;
  Best Local Similarity   53.1%;  Pred. No. 1.4e-06;
  Matches   17;  Conservative   11;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPS 32
           |::|||||:::  ::|:| : ||:|| ||||:
Db      97 HAEGTFTSDVTQHLDEKAAKEFIDWLINGGPT 128


RESULT 3
Q8UWL9
ID   Q8UWL9      PRELIMINARY;      PRT;   220 AA.
AC   Q8UWL9;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DE   Proglucagon.
OS   Hoplobatrachus rugulosus.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae;
OC   Hoplobatrachus.
OX   NCBI_TaxID=110072;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Yeung C.-M., Chow B.K.C.;
RT   "Identification of a proglucagon cDNA from Rana tigrina rugulosa that
RT   encodes two GLP-1s.";
RL   Gen. Comp. Endocrinol. 124:0-0(2001).
DR   EMBL; AF324209; AAL35758.1; -.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 4.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 4.
DR   PROSITE; PS00260; GLUCAGON; UNKNOWN_4.
SQ   SEQUENCE   220 AA;  25615 MW;  C72D926E7F89E381 CRC64;

  Query Match             47.6%;  Score 99;  DB 13;  Length 220;
  Best Local Similarity   44.4%;  Pred. No. 3.1e-05;
  Matches   16;  Conservative    9;  Mismatches   11;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGAP 36
           |::|||||::  :||:| : |::||  | |    |
Db     135 HAEGTFTSDMTSYLEEKAAKEFVDWLIKGRPKRNFP 170


RESULT 4
Q91409
ID   Q91409      PRELIMINARY;      PRT;    72 AA.
AC   Q91409; Q91232;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   PROGLUCAGON (Fragment).
OS   Oncorhynchus tschawytscha (Chinook salmon) (King salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=74940;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=95295739; PubMed=7776976;
RA   Irwin D.M., Wong J.;
RT   "Trout and chicken proglucagon: alternative splicing generates mRNA
RT   transcripts encoding glucagon-like peptide 2.";
RL   Mol. Endocrinol. 9:267-277(1995).
DR   EMBL; S78474; AAD14283.1; -.
DR   EMBL; U19920; AAC59670.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; UNKNOWN_1.
FT   NON_TER      1      1
SQ   SEQUENCE   72 AA;  8293 MW;  8584352B1C260A31 CRC64;

  Query Match             44.7%;  Score 93;  DB 13;  Length 72;
  Best Local Similarity   48.3%;  Pred. No. 5.7e-05;
  Matches   14;  Conservative   10;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |:|||:|||:|  ::::| : |: |||:|
Db      39 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 67


RESULT 5
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Q91971
ID   Q91971      PRELIMINARY;      PRT;   178 AA.
AC   Q91971; Q91408; Q91188; Q92169;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE   Glucagon I precursor.
OS   Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8022;
RN   [1]
RP   SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC   TISSUE=DISTAL SMALL INTESTINE, AND PANCREAS;
RX   MEDLINE=95295739; PubMed=7776976;
RA   Irwin D.M., Wong J.;
RT   "Trout and chicken proglucagon: alternative splicing generates mRNA
RT   transcripts encoding glucagon-like peptide 2.";
RL   Mol. Endocrinol. 9:267-277(1995).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC   -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) AND
CC       PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN
CC       RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; U19913; AAC59667.1; -.
DR   EMBL; U19917; AAC59669.1; -.
DR   EMBL; U19918; AAC60212.1; -.
DR   EMBL; U19919; AAC60213.1; -.
DR   EMBL; U19918; AAC60213.1; JOINED.
DR   EMBL; S78475; AAB34505.1; -.
DR   EMBL; S78473; AAB34504.2; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 3.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 3.
DR   PROSITE; PS00260; GLUCAGON; 3.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW   Alternative splicing; Multigene family.
FT   SIGNAL        1      ?       POTENTIAL.
FT   PEPTIDE       ?     49       GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT   PEPTIDE      52     80       GLUCAGON.
FT   PEPTIDE      85    120       GLUCAGON-LIKE PEPTIDE 1.
FT   PEPTIDE     137    169       GLUCAGON-LIKE PEPTIDE 2.
FT   VARSPLIC    124    178       MISSING (IN PANCREATIC ISOFORM).
SQ   SEQUENCE   178 AA;  20034 MW;  5CF6980CF2A9D58E CRC64;

  Query Match             44.7%;  Score 93;  DB 13;  Length 178;
  Best Local Similarity   48.3%;  Pred. No. 0.00016;
  Matches   14;  Conservative   10;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |:|||:|||:|  ::::| : |: |||:|
Db      90 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 118


RESULT 6
Q91189
ID   Q91189      PRELIMINARY;      PRT;   178 AA.
AC   Q91189; Q92168;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE   Glucagon II precursor.
OS   Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8022;
RN   [1]
RP   SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC   TISSUE=DISTAL SMALL INTESTINE, AND PANCREAS;
RX   MEDLINE=95295739; PubMed=7776976;
RA   Irwin D.M., Wong J.;
RT   "Trout and chicken proglucagon: alternative splicing generates mRNA
RT   transcripts encoding glucagon-like peptide 2.";
RL   Mol. Endocrinol. 9:267-277(1995).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC   -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) AND
CC       PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN
CC       RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; U19914; AAC59668.1; -.
DR   EMBL; U19916; AAC60210.1; -.
DR   EMBL; U19915; AAC60210.1; JOINED.
DR   EMBL; U19915; AAC60209.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 3.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 3.
DR   PROSITE; PS00260; GLUCAGON; UNKNOWN_2.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW   Alternative splicing; Multigene family.
FT   SIGNAL        1      ?       POTENTIAL.
FT   PEPTIDE       ?     49       GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT   PEPTIDE      52     80       GLUCAGON.
FT   PEPTIDE      85    120       GLUCAGON-LIKE PEPTIDE 1.
FT   PEPTIDE     137    169       GLUCAGON-LIKE PEPTIDE 2.
FT   VARSPLIC    124    178       MISSING (IN PANCREATIC ISOFORM).
SQ   SEQUENCE   178 AA;  19998 MW;  E89D73866CD91C66 CRC64;

  Query Match             44.7%;  Score 93;  DB 13;  Length 178;
  Best Local Similarity   48.3%;  Pred. No. 0.00016;
  Matches   14;  Conservative   10;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |:|||:|||:|  ::::| : |: |||:|
Db      90 HADGTYTSDVSTYLQDQAAKDFVSWLKSG 118


RESULT 7
Q9PRW9
ID   Q9PRW9      PRELIMINARY;      PRT;    62 AA.
AC   Q9PRW9; Q9PRX0; Q9PRW8;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DE   Glucagon precursor (Contains: glucagon-29; glucagon-33; glucagon-like
DE   peptide] (Fragments).
OS   Scyliorhinus canicula (Spotted dogfish) (Spotted catshark).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC   Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
OC   Scyliorhinidae; Scyliorhinus.
OX   NCBI_TaxID=7830;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=PANCREAS;
RX   MEDLINE=94286411; PubMed=8015974;
RA   Conlon J.M., Hazon N., Thim L.;
RT   "Primary structures of peptides derived from proglucagon isolated from
RT   the pancreas of the elasmobranch fish, Scyliorhinus canicula.";
RL   Peptides 15:163-167(1994).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
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KW   Glucagon family; Hormone.
FT   PEPTIDE       1     29       GLUCAGON-29.
FT   PEPTIDE       1     33       GLUCAGON-33.
FT   NON_CONS     33     34
FT   PEPTIDE      34     62       GLUCAGON-LIKE PEPTIDE.
SQ   SEQUENCE   62 AA;  7270 MW;  C5FF487C12C69CD1 CRC64;

  Query Match             42.1%;  Score 87.5;  DB 13;  Length 62;
  Best Local Similarity   45.9%;  Pred. No. 0.00026;
  Matches   17;  Conservative    6;  Mismatches   11;  Indels    3;  Gaps    1;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWL---KNGGPSSG 34
          ||:|||||| || |:    : |:::|   |  | : |
Db      1 HSEGTFTSDYSKYMDNRRAKDFVQWLMSTKRNGHAEG 37


RESULT 8
Q9PUR1
ID   Q9PUR1      PRELIMINARY;      PRT;   160 AA.
AC   Q9PUR1; Q9PRZ8; Q9PRZ7;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   Glucagon I precursor [Contains: Glucagon; glucagon-like peptide 1
DE   (GLP-1); glucagon-like peptide 2 (GLP-2)].
OS   Petromyzon marinus (Sea lamprey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
OC   Petromyzontiformes; Petromyzontidae; Petromyzon.
OX   NCBI_TaxID=7757;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=INTESTINE;
RX   MEDLINE=20022986; PubMed=10555286;
RA   Irwin D.M., Huner O., Youson J.H.;
RT   "Lamprey proglucagon and the origin of glucagon-like peptides.";
RL   Mol. Biol. Evol. 16:1548-1557(1999).
RN   [2]
RP   SEQUENCE OF 43-71 AND 82-113.
RC   TISSUE=INTESTINE;
RX   MEDLINE=94010172; PubMed=8405897;
RA   Conlon J.M., Nielsen P.F., Youson J.H.;
RT   "Primary structures of glucagon and glucagon-like peptide isolated
RT   from the intestine of the parasitic phase lamprey Petromyzon
RT   marinus.";
RL   Gen. Comp. Endocrinol. 91:96-104(1993).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; AF159707; AAF09186.1; -.
DR   HSSP; P01275; 1BH0.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Signal; Cleavage on pair of basic residues;
KW   Multigene family.
FT   SIGNAL        1     22       POTENTIAL.
FT   PEPTIDE      43     71       GLUCAGON.
FT   PEPTIDE      82    113       GLUCAGON-LIKE PEPTIDE 1.
FT   PEPTIDE     130    160       GLUCAGON-LIKE PEPTIDE 2.
SQ   SEQUENCE   160 AA;  18042 MW;  9A52C530D5A74072 CRC64;

  Query Match             42.1%;  Score 87.5;  DB 13;  Length 160;
  Best Local Similarity   51.5%;  Pred. No. 0.00077;
  Matches   17;  Conservative    5;  Mismatches    8;  Indels    3;  Gaps    1;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWL---KNGG 30
          ||:|||||| || :| :  : |: ||   | ||
Db     43 HSEGTFTSDYSKYLENKQAKDFVRWLMNAKRGG 75


RESULT 9
O12956
ID   O12956      PRELIMINARY;      PRT;   204 AA.
AC   O12956; O12955;
DT   01-JUL-1997 (TrEMBLrel. 04, Created)
DT   01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
DT   01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE   Glucagon precursor.
OS   Heloderma suspectum (Gila monster).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Helodermatidae;
OC   Heloderma.
OX   NCBI_TaxID=8554;
RN   [1]
RP   SEQUENCE FROM N.A., ALTERNATIVE SPLICING, AND TISSUE SPECIFICITY.
RC   TISSUE=INTESTINE, AND PANCREAS;
RX   MEDLINE=97172477; PubMed=9020121;
RA   Chen Y.E., Drucker D.J.;
RT   "Tissue-specific expression of unique mRNAs that encode proglucagon-
RT   derived peptides or exendin 4 in the lizard.";
RL   J. Biol. Chem. 272:4108-4115(1997).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL (BY SIMILARITY).
CC   -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; LPII (SHOWN HERE) AND LPI; ARE
CC       PRODUCED BY ALTERNATIVE SPLICING.
CC   -!- TISSUE SPECIFICITY: ISOFORM LPII IS EXPRESSED IN BOTH PANCREAS AND
CC       INTESTINE. EXPRESSION OF ISOFORM LPI IS RESTRICTED TO THE
CC       PANCREAS. NEITHER ISOFORM IS DETECTED IN SALIVARY GLAND.
CC   -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN
CC       RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; U77612; AAB51129.1; -.
DR   EMBL; U77611; AAB51128.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 3.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 3.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Cleavage on pair of basic residues; Signal;
KW   Alternative splicing.
FT   SIGNAL        1     20       BY SIMILARITY.
FT   PEPTIDE      21     50       GRPP (GLICENTINE RELATED POLYPEPTIDE).
FT   PEPTIDE      53     81       GLUCAGON.
FT   PEPTIDE     116    145       GLUCAGON-LIKE PEPTIDE 1.
FT   PEPTIDE     164    196       GLUCAGON-LIKE PEPTIDE 2.
FT   VARSPLIC    149    149       D -> E (IN ISOFORM LPI).
FT   VARSPLIC    150    204       MISSING (IN ISOFORM LPI).
SQ   SEQUENCE   204 AA;  23553 MW;  B132E3FE46873E72 CRC64;

  Query Match             41.8%;  Score 87;  DB 13;  Length 204;
  Best Local Similarity   51.7%;  Pred. No. 0.0012;
  Matches   15;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy      1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
          |:|| :|||:|  :| :| : || || ||
Db    116 HADGRYTSDISSYLEGQAAKEFIAWLVNG 144


RESULT 10
Q91410
ID   Q91410      PRELIMINARY;      PRT;   206 AA.
AC   Q91410;
DT   01-NOV-1996 (TrEMBLrel. 01, Created)
DT   01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   Proglucagon.
GN   PROGLUCAGON.
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
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RP   SEQUENCE FROM N.A.
RX   MEDLINE=95295739; PubMed=7776976;
RA   Irwin D.M., Wong J.;
RT   "Trout and chicken proglucagon: alternative splicing generates mRNA
RT   transcripts encoding glucagon-like peptide 2.";
RL   Mol. Endocrinol. 9:267-277(1995).
DR   EMBL; S78477; AAB34506.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 3.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 3.
DR   PROSITE; PS00260; GLUCAGON; 3.
SQ   SEQUENCE   206 AA;  23875 MW;  AB299E1B02FC6AA4 CRC64;

  Query Match             41.3%;  Score 86;  DB 13;  Length 206;
  Best Local Similarity   50.0%;  Pred. No. 0.0016;
  Matches   14;  Conservative    9;  Mismatches    5;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKN 28
           |:||||||::| ::: | : |::|| |
Db     166 HADGTFTSDINKILDDMAAKEFLKWLIN 193


RESULT 11
Q95LG0
ID   Q95LG0      PRELIMINARY;      PRT;   180 AA.
AC   Q95LG0;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DE   Preproglucagon.
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX   NCBI_TaxID=9615;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Irwin D.M.;
RT   "cDNA cloning of proglucagon from the stomach and pancreas of the
RT   dog.";
RL   Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF308439; AAL09425.1; -.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 3.
DR   PROSITE; PS00260; GLUCAGON; UNKNOWN_3.
SQ   SEQUENCE   180 AA;  21114 MW;  80F66941AFC324FD CRC64;

  Query Match             40.9%;  Score 85;  DB 6;  Length 180;
  Best Local Similarity   51.7%;  Pred. No. 0.0019;
  Matches   15;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNG 29
           |::|||||:|  :| :| : || ||  |
Db      98 HAEGTFTSDVSSYLEGQAAKEFIAWLVKG 126


RESULT 12
Q9PUR0
ID   Q9PUR0      PRELIMINARY;      PRT;   120 AA.
AC   Q9PUR0;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   Glucagon II precursor [Contains: Glucagon; glucagon-like peptide
DE   (GLP)].
OS   Petromyzon marinus (Sea lamprey).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
OC   Petromyzontiformes; Petromyzontidae; Petromyzon.
OX   NCBI_TaxID=7757;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=INTESTINE;
RX   MEDLINE=20022986; PubMed=10555286;
RA   Irwin D.M., Huner O., Youson J.H.;
RT   "Lamprey proglucagon and the origin of glucagon-like peptides.";
RL   Mol. Biol. Evol. 16:1548-1557(1999).
CC   -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
CC       THE BLOOD SUGAR LEVEL.
CC   -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
DR   EMBL; AF159708; AAF09187.1; -.
DR   HSSP; P01275; 1BH0.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 2.
KW   Glucagon family; Hormone; Signal; Cleavage on pair of basic residues;
KW   Multigene family.
FT   SIGNAL       1      ?       POTENTIAL.
FT   PEPTIDE      44     72      GLUCAGON.
FT   PEPTIDE      89     120     GLUCAGON-LIKE PEPTIDE.
SQ   SEQUENCE   120 AA;  13397 MW;  FBDE667B96E198D8 CRC64;

  Query Match             39.9%;  Score 83;  DB 13;  Length 120;
  Best Local Similarity   43.3%;  Pred. No. 0.0022;
  Matches   13;  Conservative    9;  Mismatches    8;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGG 30
           ||||:||:|::  ::  : : |:|||| |
Db      89 HSDGSFTNDMNVMLDRMSAKNFLEWLKQQG 118


RESULT 13
Q9DDE6
ID   Q9DDE6      PRELIMINARY;      PRT;   121 AA.
AC   Q9DDE6;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   Glucagon polyprotein.
GN   GCG OR GLU.
OS   Brachydanio rerio (Zebrafish) (Zebra danio).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC   Cyprinidae; Danio.
OX   NCBI_TaxID=7955;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99425190; PubMed=10495291;
RA   Argenton F., Zecchin E., Bortolussi M.;
RT   "Early appearance of pancreatic hormone-expressing cells in the
RT   zebrafish embryo.";
RL   Mech. Dev. 87:217-221(1999).
DR   EMBL; AJ133697; CAC20108.1; -.
DR   HSSP; P01274; 1GCN.
DR   ZFIN; ZDB-GENE-010219-1; gcg.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Polyprotein.
FT   CHAIN        49     79      GLUCAGON.
FT   CHAIN        88     121     GLUCAGON-LIKE PEPTIDE 1.
SQ   SEQUENCE   121 AA;  13537 MW;  A85385F690DA180F CRC64;

  Query Match             39.9%;  Score 83;  DB 13;  Length 121;
  Best Local Similarity   40.0%;  Pred. No. 0.0022;
  Matches   14;  Conservative    9;  Mismatches   12;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGA 35
           ||:|||::| || :|    : |::|| |   : |:
Db      50 HSEGTFSNDYSKYLETRRAQDFVQWLMNAKRNGGS 84
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RESULT 14
Q9DG43
ID   Q9DG43      PRELIMINARY;      PRT;    96 AA.
AC   Q9DG43;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE   Proglucagon (Fragment).
OS   Ambloplites rupestris.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC   Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
OC   Centrarchidae; Ambloplites.
OX   NCBI_TaxID=109273;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Al-Mahrouki A.A., Irwin D.M., Youson J.H.;
RT   "Rock Bass Proglucagon.";
RL   Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AF190499; AAG16778.1; -.
DR   HSSP; P01274; 1GCN.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; hormone2; 2.
DR   PRINTS; PR00275; GLUCAGON.
DR   SMART; SM00070; GLUCA; 2.
DR   PROSITE; PS00260; GLUCAGON; UNKNOWN_1.
FT   NON_TER       1     1
FT   CHAIN         1    >29       GLUCAGON.
FT   CHAIN        39    >70       GLUCAGON-LIKE PEPTIDE 1.
FT   CHAIN        86    >96       GLUCAGON-LIKE PEPTIDE 2.
FT   NON_TER      96     96
SQ   SEQUENCE   96 AA;  11225 MW;  6435033EBDDC00CE CRC64;

  Query Match             38.0%;  Score 79;  DB 13;  Length 96;
  Best Local Similarity   42.9%;  Pred. No. 0.0059;
  Matches   15;  Conservative    5;  Mismatches   15;  Indels    0;  Gaps    0;

Qy       1 HSDGTFTSDLSKQMEEEAVRLFIEWLKNGGPSSGA 35
           || ||||:| :  :|:   : || || |   |  |
Db       1 HSQGTFTNDYTNYLEDRQAQDFIRWLMNNKRSGAA 35


RESULT 15
Q92XW3
ID   Q92XW3      PRELIMINARY;      PRT;   347 AA.
AC   Q92XW3;
DT   01-DEC-2001 (TrEMBLrel. 19, Created)
DT   01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT   01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DE   Hypothetical protein RA1127.
GN   RA1127 OR SMA2063.
OS   Rhizobium meliloti (Sinorhizobium meliloti).
OG   Plasmid pSymA (megaplasmid 1).
OC   Bacteria; Proteobacteria; alpha subdivision; Rhizobiaceae group;
OC   Rhizobiaceae; Sinorhizobium.
OX   NCBI_TaxID=382;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=1021;
RX   MEDLINE=21396509; PubMed=11481432;
RA   Barnett M.J., Fisher R.F., Jones T., Komp C., Abola A.P.,
RA   Barloy-Hubler F., Bowser L., Capela D., Galibert F., Gouzy J.,
RA   Gurjal M., Hong A., Huizar L., Hyman R.W., Kahn D., Kahn M.L.,
RA   Kalman S., Keating D.H., Palm C., Peck M.C., Surzycki R., Wells D.H.,
RA   Yeh K.-C., Davis R.W., Federspiel N.A., Long S.R.;
RT   "Nucleotide sequence and predicted functions of the entire
RT   Sinorhizobium meliloti pSymA megaplasmid.";
RL   Proc. Natl. Acad. Sci. U.S.A. 98:9883-9888(2001).
DR   EMBL; AE007298; AAK65785.1; -.
DR   InterPro; IPR001005; Myb_DNA_binding.
DR   PROSITE; PS00037; MYB_1; UNKNOWN_1.
KW   Hypothetical protein; Plasmid; Complete proteome.
SQ   SEQUENCE   347 AA;  38706 MW;  2BDEF2867AD0475C CRC64;

  Query Match             29.8%;  Score 62;  DB 16;  Length 347;
  Best Local Similarity   43.3%;  Pred. No. 4.9;
  Matches   13;  Conservative    5;  Mismatches   12;  Indels    0;  Gaps    0;

Qy      10 LSKQMEEEAVRLFIEWLKNGGPSSGAPPPS 39
           |   : |||  | :||:::|||   |  |
Db     272 LQWSVSEEADLLSLEWVESGGPSVSEPSRS 301


Search completed: March 28, 2003, 08:39:25
Job time : 87 secs
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